ume 42 Number 4

The JOURNAL

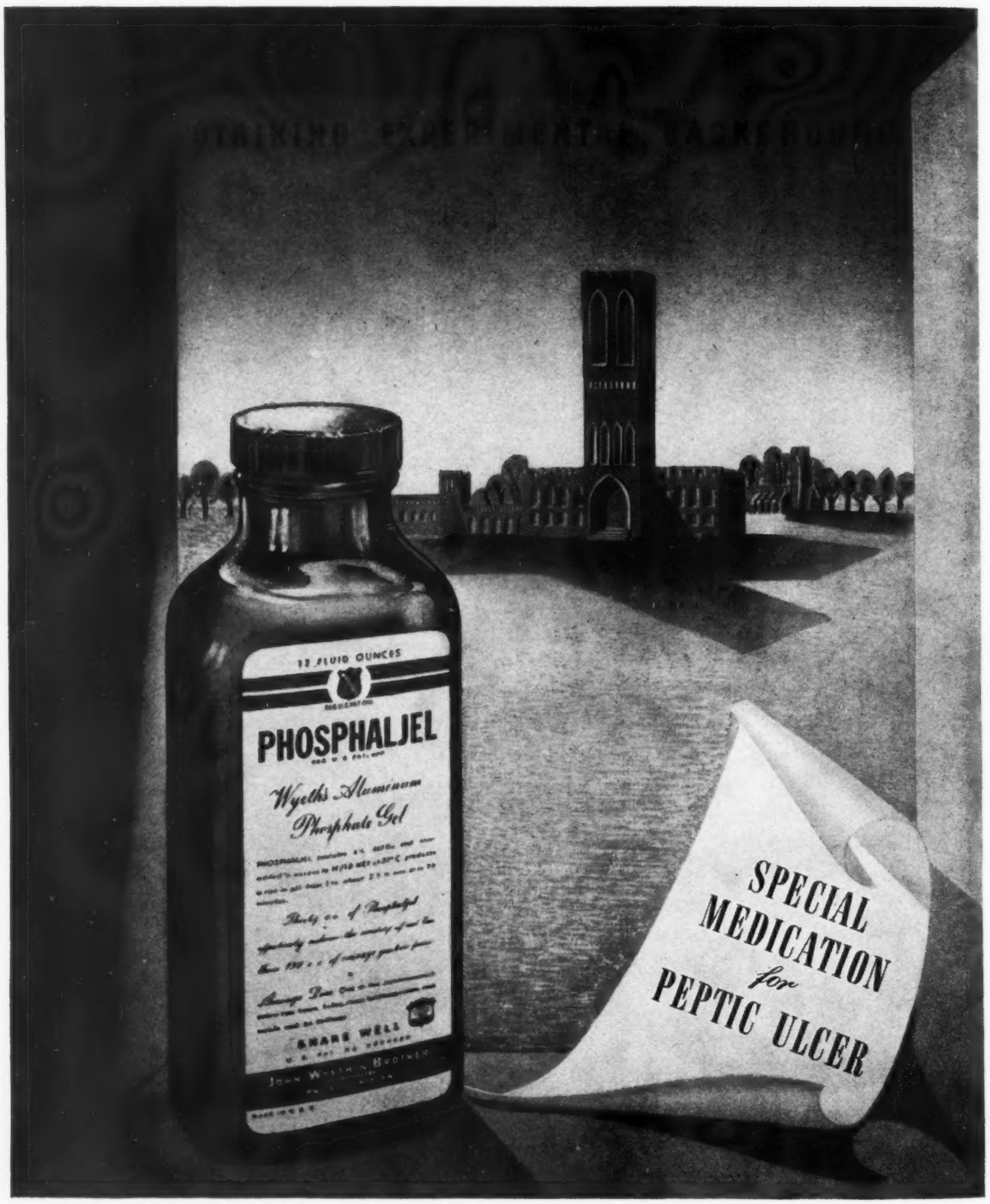
F THE MICHIGAN STATE MEDICAL SOCIETY

MICHIGAN'S CIVIL WAR GOVERNOR AND THE STATE CAPITOL AT NIGHT

APRIL
1943

Complete Contents on Page 265

Single Copies
50 Cents
Yearly Subscription
$5.00



Wyeth's Phosphaljel is supplied in 12-fluidounce bottles*

PHOSPHALJEL WYETH'S ALUMINUM PHOSPHATE GEL

Effective **in the treatment of gastrojejunal ulcer and other cases of peptic ulcer associated with a relative or an absolute deficiency of pancreatic juice, diarrhea, or a low phosphorus diet.**

*Reg. U. S. Pat. Off.

Phosphaljel contains 4% aluminum phosphate.

JOHN WYETH & BROTHER • INCORPORATED • PHILADELPHIA

• *Violence during grand movements is pictured by Paul Richer, one of the distinguished artists of medicine, in his Etudes Cliniques sur L'Hysterio-Epilepsie (1881).*

"A sharp edged weapon which must be used both boldly and deftly."[1]

Dilantin* Sodium (phenytoin sodium) is "recognized as the drug of choice for patients having grand mal or psychomotor seizures. Its usefulness should not be lessened just because its administration requires careful and intelligent supervision by the attending physician. Ignorance or timidity on the part of the doctor has blighted the budding hope of many a patient . . . Epilepsy is a tough disease which laughs at dull weapons."[1]

Kapseals Dilantin Sodium (phenytoin sodium) are providing new relief for many epileptic patients. With its use seizures usually decrease in number and sometimes cease entirely.

*TRADE-MARK REG. U.S. PAT. OFF.

1. Lennox, W. G.: Jl. A.M.A., Oct. 10, 1942

Detailed Literature on Request

Kapseals

DILANTIN SODIUM

A product of modern research offered to the medical profession by

ARMY E NAVY

PARKE, DAVIS & COMPANY

DETROIT • MICHIGAN

WAR BULLETIN

Dr. Warren E. Bow, president of Wayne University, conferred degrees upon sixty-nine graduates of the College of Medicine at a special commencement held March 4 at 10:30 a.m., in the Rackham Educational Memorial. Listed among the candidates are three women: Elizabeth Thorndike Endicott, Chestfield Road, Bloomfield Hills; H. Marjorie Peebles-Meyers, 2019 St. Antoine; and Elizabeth Reed, 7601 Dexter.

Because the degree of bachelor of medicine, usually granted upon the successful completion of the academic curriculum, has been abolished, all sixty-nine graduates will become doctors of medicine at this time. In the past, it has been customary to confer the doctor's degree only upon completion of a year's internship by the candidate.

Measures already adopted by Wayne to meet the existing shortage of trained men and women include accelerated courses in nursing and in medicine. The degree course in nursing, which formerly covered five years, may now be completed in four, while the requirements for entrance to the Medical School have been cut from three to two years. Although no courses have been removed from the curriculum leading to the doctor's degree in medicine, the establishment of summer courses has materially shortened the over-all time required to qualify for the degree, University authorities state.

The Board of Education at its last meeting approved an agreement executed between Wayne University and the executive secretary of the United States Office of Scientific Research which provides that federal funds, not to exceed $58,766, be granted to the College of Medicine to continue the study of contaminated wounds.

The Board also accepted the sum of $600 from the Lakeside Laboratories, Inc., to be expended for toxicity tests. The project is under the direction of Dr. Charley J. Smyth, instructor in clinical medicine, and Dr. Fredrick F. Yonkman, professor of pharmacology and therapeutics.

Senate Bill 739 has passed the Senate and House, providing that during the present war and for six months thereafter personnel of all components of the Army of the United States may be detailed as students at technical, professional and other educational institutions, or as students, observers or investigators at industrial plants, hospitals and other places.

The International College of Surgeons will hold its Fourth International Assembly June 14, 15, 16, at the Waldorf Astoria Hotel, New York City. Eminent surgeons in government military and civilian executive offices approved of the meeting of the assembly.

COUNTY MEDICAL SOCIETY MEETINGS

Bay—February 24, 1943—Speaker: A. R. McKinney, M.D. Subject: Ophthalmology in General Practice."

March 10, 1943—Speaker: William Clift, M.D., Subject: "Roentgenology."

Calhoun—March 2, 1943—Hart Hotel—Speaker: Gordon Myers, M.D. Subject: "Syncope."

Dickinson-Iron—March 11, 1943—Crystal Inn—Speaker: A. H. Miller, M.D.

Genesee—February 23, 1943—Elks' Club—Surprise Meeting.

March 9, 1943—Elks Club—Business Meeting.

March 23, 1943—Elks Club—Speaker: Conrad R. Lam, M.D. Subject: "The Clinical Use of the Anticoagulents Heparin and Dicumarol."

Ingham—March 16, 1943—Hotel Olds —Speaker: George L. Waldbott, M.D. Subject: "Some Problems of Allergy."

Kalamazoo—March 16, 1943—Public Library Bldg.—Speaker: Lt. Col. Robert H. Kennedy, M.C. Subject: "Treatment of Wartime Injuries."

Kent—March 9, 1943—Browning Hotel—Speaker: Herbert I. Kallet, M.D. Subject: "Chronic Ulcerative Colitis."

Jackson—February 16, 1943—Hotel Hayes Ballroom—Speaker: Norman F. Miller, M.D., F.A.C.S.

March 16, 1943—Hotel Hayes Ballroom—Speaker: George J. Curry, M.D., F.A.C.S. Subject: "The Management of Lower Extremity Fractures."

Oakland—March 3, 1943—Kingsley Inn—Speaker: A. C. Curtis, M.D. Subject: "What to Do with a Patient with a Positive Serology."

St. Clair—March 23, 1943—Hotel Harrington—Speakers: H. Allen Moyer, M.D., and E. V. Thiehoff, M.D.

Washtenaw—March 9, 1943—Michigan Union—Speakers: Mark Marshall, M.D., and Henry Ransom, M.D. Subject: "Peptic Ulcer."

Wayne—March 15, 1943—Art Institute—Speaker: Frederick I. Lewis, M.D., F.R.C.S. Subject: The Management of Non-Union Following Fractures of the Neck of the Femur."

West Side Medical Society met March 17, 1943—Speaker: Warren B. Cooksey, M.D. Subject: "Blood Plasma in Wartime."

COUNCIL AND COMMITTEE MEETING

March 7, 1943—Professional Liaison Committee—Statler Hotel, Detroit.

March 11, 1943—Legislative Committee—Hotel Olds, Lansing.

March 17, 1943—Medical Preparedness Committee—Statler Hotel, Detroit, Executive Committee of The Council—Statler Hotel, Detroit.

March 18, 1943—Industrial Health Committee—Statler Hotel, Detroit.

The *Oakland County Medical Society Bulletin* contains a page entitled "Post 'Scrips' from the Boys." This contains brief news items on O.C.M.S. members in Service, across the seas, in the states, as well as news notes on the home front.

"How to Use Visual Aids" by Sheldon M. Hayden, M.D., was published in the January, 1943, *Michigan Extension News*, a publication of Michigan State College. This describes briefly the "Do's" and "Don'ts" in using illustrative objects when speaking before an audience. The suggestions are worth while reading—and following.

"MANPOWER" . . .
and the Menopause

"MANPOWER" in industry is rapidly changing to "womanpower." And, with so many women on production and assembly lines, the problem of absenteeism and lowered efficiency, particularly among women in their forties, deserves consideration.

It has been estimated that 80 per cent of women in this age group experience menopausal symptoms of varying intensity. Efficiency demands that these workers be physically and emotionally fit. Clinical investigations show that, in a large percentage of cases, they can be kept "on the job" through the use of adequate estrogenic therapy.

The high clinical effectiveness of Amniotin in relieving the distressing vasomotor symptoms of the menopause has been amply demonstrated by numerous clinical reports published during the past 12 years. The product has likewise proved valuable in treating other conditions related to a deficiency of estrogenic substances.

Two New Advantages . . . The new economy-size vials of Amniotin offer two distinct advantages. They provide a substantial saving over the cost of Amniotin in ampuls and they facilitate the use of fractional doses without waste of material.

Differing from estrogenic substances containing or derived from a single crystalline factor, Amniotin is a highly purified, non-crystalline preparation of naturally occurring estrogenic substances derived from pregnant mares' urine. Its estrogenic activity is expressed in terms of the equivalent of international units of estrone. In addition to the economy-vial packages and the ampuls (both of which are for intramuscular injection) you can secure Amniotin in capsules for oral administration and in pessaries for intravaginal use.

ECONOMY-SIZE VIALS	10 cc.	20,000 I. U. per cc.
	10 cc.	10,000 I. U. per cc.
	20 cc.	2,000 I. U. per cc.

For literature address Professional Service Department, 745 Fifth Avenue, New York

Amniotin

A SQUIBB PREPARATION OF ESTROGENIC SUBSTANCES OBTAINED FROM THE URINE OF PREGNANT MARES

MOTION PICTURES FOR COUNTY MEDICAL SOCIETIES

Motion pictures on various scientific subjects are available to County Medical Societies on a loan basis. Requests for films should be instituted as far in advance as possible, so that the proper reservations may be made. The exact shipping addresses and dates should be given at the time of the request; also the type of apparatus in which the film is to be run. Responsibility for the projection and care of the film must be borne by the County Society borrowing it. Projectors are to be supplied by the County Society. In many cases, the only expense incurred is that of transportation both ways.

Several organizations and firms advise that they have in preparation a number of films which will be available for loan to county medical societies. As these and other motion pictures are invited to the attention of the Michigan State Medical Society, full information will be published in the MSMS JOURNAL from time to time.

The incomplete list of motion pictures includes:

Dynamics of Respiration
*S—C—16—2, ea. 400′—Owner AMA
Regional Anesthesia for Operations on the Neck
S—16—1—400′—Owner AMA
Signs of Inhalation Anesthesia
S—16—2, 300′ ea.—Owner AMA
Technique of Blocking Sacral Nerve
S—16—1,400′—Owner AMA
The Technique of Carbon Dioxide Absorption in Anesthetic Atmospheres
S—16—2, 400′ ea.—Owner AMA
The Role of Carbon Dioxide in Convulsions During Anesthesia
S—16—1—200′—Owner AMA
Cancer—(Canti Cancer Film)
S—35—3—Produced by Dr. R. G. Canti, London, England
Medical History in Clinical Teaching
S—16—2, 300′ ea. Prepared by Department of Cardiology, Women's Medical College, Philadelphia
Comparative Physiology of Labor
S—16—4, total about 1400′. Produced by Prof. K. deSnoo

OTOLARYNGOLOGY

The Hygiene of Swimming
S—16—1—400′—Owner AMA

PHYSICAL THERAPY

Aids in Muscle Training
S—16—1—300′—Owner AMA
Contraction of Arteries and Arterio-Venous Anastomoses
S—16—1—250′—Owner Dr. E. R. Clark, University of Pennsylvania
Effects of Heat and Cold on the Circulation of the Blood
S—16—1—300′—Owner Dr. E. R. Clark, University of Pennsylvania
Effects of Massage on the Circulation of the Blood
S—16—1—200′—Owner Dr. E. R. Clark, University of Pennsylvania
Massage
S—16—1—100′—Owner AMA
Occupational Therapy
S—16—1—300′—Owner AMA
Underwater Therapy
S—16—1—400′—Owner AMA
Syphilis—A Motion Picture Clinic
Sound—35—9 reels; also 16 mm, 2 large reels, 1600′ ea. Time 1½ hrs.—Owner AMA
The Hygiene of Swimming
S—16—1—400′—Owner AMA
The Story of "Lyovac" Normal Human Plasma
So—C—RT: 35—Owner: Sharp & Dohme, Detroit, Mich.

*Definition of Symbols

S—Silent	16 or 35—millimeters
So—Sound	1 or 2, etc.—No. of reels
C—Colored	RT—Running time

Hypodermic Syringes and Needles; Their Care and Function.
*S—C—16—RT—62—Owner: The Hospital Service Department, Becton, Dickinson & Co., Rutherford, N. J. (This film has six reels; divided by text, two reels each; any two may be shown as complete picture).
The Basic Requirements for Good Syringes and Needles. RT: 22
The Care and Sterilization of Hypodermic Syringes and Needles. RT: 22
Uses and Simple Injection Techniques of Hypodermic Syringes and Needles. RT: 18
Varicose Veins and Their Complications by Richard E. Heller, M.D.
C-16—Owner: The Hospital Service Department, Becton, Dickinson & Co.
Peptic Ulcer
So—C—16—1600′—RT: 45—Owner: John Wyeth & Bros., Inc. Philadelphia
The Technique of Male Hygiene
So—16—400′—RT: 12—Owner: John Wyeth & Bros,. Inc., Philadelphia
Treatment of Trichomonas Vaginalis Vaginitis
S—C—16—400′—RT: 12—Owner: John Wyeth & Bros., Inc., Philadelphia
Pentothal Sodium for Intravenous Anesthesia
S—C—16—1200′—RT: 30—Owner: Abbott Laboratories, Chicago
The Liquid Life Line
S—C—16—800′—RT: 25—Owner: Abbott Laboratories, Chicago
Treatment of Vaginalis Vaginitis with Cinquarsen
S—16—500′—RT: 15—20—Owner: Holland-Rantos Co., Inc., New York
Amebiasis
S—16—RT: 30—Owner: Eli Lilly & Co., Indianapolis
The Anemias
S—16—RT: 25—Owner: Eli Lilly & Co., Indianapolis
Thiamine Chloride Deficiency
S—C—16—RT: 25—Owner: Eli Lilly & Co., Indianapolis
Riboflavin Deficiency
S—C—16—RT: 35—Owner: Eli Lilly & Co., Indianapolis
Nicotinic Acid Deficiency
S—C—16—RT: 35—Owner: Eli Lilly & Co., Indianapolis
Sub-Clinical Aspects of Vitamin B Complex Deficiencies.
So—C—16—1200′—RT: 32—Owner: E. R. Squibb & Sons, New York
Also
S—16—3—4000′—Owner: E. R. Squibb & Sons, New York

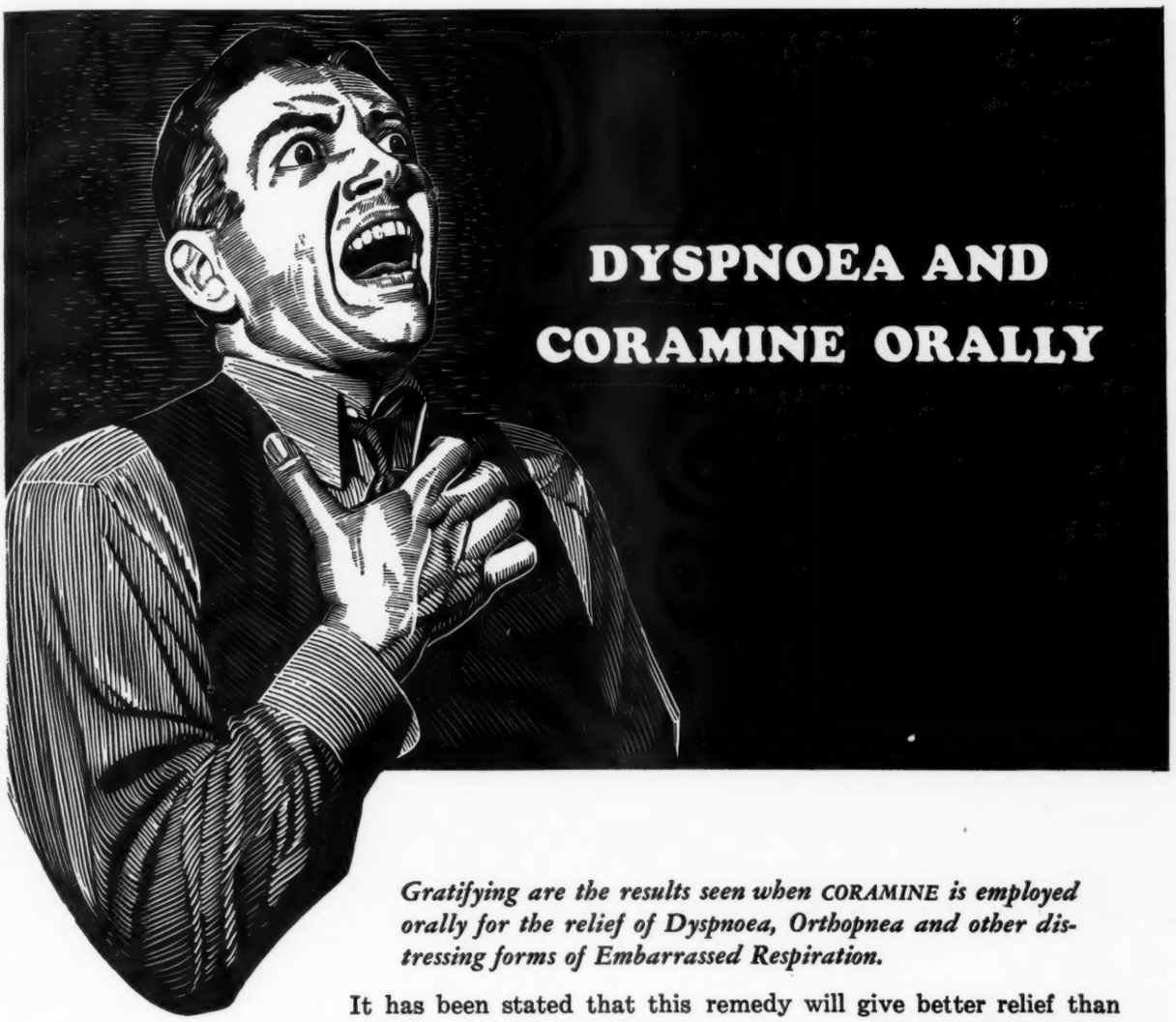
SURGERY

Knee Surgery
S—16—36′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Gastric Ulcer
S—16—239′—RT: 9—Owner: Mead Johnson & Co., Evansville, Ind.
Goiter Surgery
S—16—462′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
Bone Grafting in the Lumbosacral Spine
S—16—395′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Bone Grafting in the Lumbar Spine
S—16—232′—RT: 8—Owner: Mead Johnson & Co., Evansville, Ind.
Plastic Surgery
S—16—2—570′—RT: 20—Owner: Mead Johnson & Co., Evansville, Ind.
Restoration of Function in Cases of Harelip
S—16—369′—RT: 13—Owner: Mead Johnson & Co., Evansville, Ind.
The Administration of Oxygen by Oro-Pharyngeal Catheter
S—16—375′—RT: 13—Owner: Mead Johnson & Co., Evansville, Ind.
The Treatment of Empyema (Suppurative Pleuritis)
S. or So—C—16—3—925′—RT: 32—Owner: Mead Johnson & Co., Evansville, Ind.
Technic of Blood Transfusion
S—16—2—725′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.

OBSTETRICS

Breech Extraction with Forceps
S—16—2—514′—RT: 18—Owner: Mead Johnson & Co., Evansville, Ind.
Breech Presentation with Manual Aid
S—16—457′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.

(Continued on Page 252)



DYSPNOEA AND CORAMINE ORALLY

Gratifying are the results seen when CORAMINE *is employed orally for the relief of Dyspnoea, Orthopnea and other distressing forms of Embarrassed Respiration.*

It has been stated that this remedy will give better relief than anything that has so far been found, when used freely and fearlessly.[1]

Often overlooked, however, is the extreme value of *CORAMINE** orally for extended periods of treatment. It has been given as a 25% solution, one dram three times daily. The wide therapeutic margin of safety reduces the possibility of undesirable side effect.

In emergencies *CORAMINE* is used intramuscularly, subcutaneously or intravenously in doses of from 5 to 10 cc. Use it in your next case of Dyspnoea.

[1]Lankford, J. S., "Coramine," Clinical Medicine & Surgery, 37, 670, 1930.

CORAMINE

AMPULS **LIQUID**

A Cardio-Respiratory Stimulant

Produced Only by Ciba

*Trade Mark Reg U. S. Pat. Off.

CIBA *Pharmaceutical Products, Inc.*

SUMMIT, NEW JERSEY

(Continued from Page 250)

Left Mediolateral Episiotomy and Repair
S—16—220′—RT: 8—Owner: Mead Johnson & Co., Evansville, Ind.
Normal Delivery
S—16—348′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Intracranial Injuries of the Newborn
S—16—450′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
A Low Cervical Caesarean Section
S—16—300′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Resuscitation of the Newborn
S—16—350′—RT: 12—Owner: Mead Johnson & Co., Evansville, Ind.
Roentgen Pelvimetry
S—16—2—800′—RT: 28—Owner: Mead Johnson & Co., Evansville, Ind.

PEDIATRICS
Differential Diagnosis of Vomiting in Newborn
S—16—3—908—RT: 32—Owner: Mead Johnson & Co., Evansville, Ind.
Technique of Breast Feeding
S—16—306′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Miscellaneous Pediatric Cases
S—16—2—700′—RT: 24—Owner: Mead Johnson & Co., Evansville, Ind.
Pediatric Nursing Technique
S—16—314′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Some Diagnostic and Therapeutic Procedures
S—16—405′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Obstructive Laryngitis
S—16—263′—RT: 9—Owner: Mead Johnson & Co., Evansville, Ind.
Tuberculosis in Childhood
S—16—275′—RT: 10—Owner: Mead Johnson & Co., Evansville, Ind.

ALLERGY
S—16—3—1300′—RT: 46—Owner: Mead Johnson & Co., Evansville, Ind.
Orthopedic Treatment of Infantile Paralysis
S—16—2—650′—RT: 23—Mead Johnson & Co., Evansville, Ind.
The Care of the Premature Infant
S—16—2—700′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.
The Preparation of Modified Milk Formulæ
So—16—C—380′—RT: 11—Owner: Mead Johnson & Co., Evansville, Ind.
Pneumonia, A Clinic by Isaac A. Abt, M.D.
S—16—C—820′—RT: 22—Owner: Mead Johnson & Co., Evansville, Ind.
When Bobby Goes to School
S—16—C—800′—RT: 25—Owner: Mead Johnson & Co., Evansville, Ind.
Appendicitis in Childhood, Joseph Brennemann, M.D.
S—16—C—1575′—RT: 45—Owner: Mead Johnson & Co., Evansville, Ind.
Erythroblastic Anemia, Thomas B. Cooley, M.D.
S—16—C—580′—RT: 16—Owner: Mead Johnson & Co., Evansville, Ind.
Collection and Preservation of Human Milk
S—16—400′—RT: 14—Owner: Mead Johnson & Co., Evansville, Ind.
Coramine
So—16—C—RT: 40—Owner: Ciba Pharmaceutical Products, Summit, N. J.
Allergic Diseases
S—16—C—2—800′—RT: 35—Owner: Lederle Laboratories, Inc., New York City
Diphtheria and Croup
S—16—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Globulin Modified Antitoxins
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Immunization Against Infectious Diseases
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Pernicious Anemia
S—16—2—800′—RT: 30—Owner: Lederle Laboratories, Inc., New York City
Pneumonia—Diagnosis and Treatment
S—16—C—3—1200′—RT: 40—Owner: Lederle Laboratories, Inc., New York City
Post-Encephalitic Parkinsonism
S—16—2—800′—RT: 25—Owner: Lederle Laboratories, Inc., New York City
Scarlet Fever
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Sulfonamide Therapy
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
The Anemias
S—16—C—3—1200′—RT: 45—Owner: Lederle Laboratories, Inc., New York City
Vitamins—and Some Deficiency Diseases
S—16—C—4—1600′—RT: 60—Owner: Lederle Laboratories, Inc., New York City
Encephalomyelitis
S—16—1—400′—RT: 20—Owner: Lederle Laboratories, Inc., New York City
Control of Poultry Diseases
S—16—C—2—800′—RT: 30—Owner: Lederle Laboratories, Inc., New York City
Normal Labor
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Eclampsia
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Post Partum Hemorrhage
S—16—3—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Movements of the Alimentary Tract in Experimental Animals
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Influence of Drugs on Gastro-Intestinal Motility
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Anatomy of the Abdominal Wall
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Story of Cholecystokinin
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
A High Posterior Gastro-Enterostomy
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Emergency Operations
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Multiple Diverticula of the Bladder
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Hydrocele
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Appendectomy
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Colles Fracture
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
The Anatomy of the Abdominal Viscera
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Radium Treatment of Carcinoma of the Cervix
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Radium Treatment of Mouth Cancer
S—16—2—RT: 30-35—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Suspension of the Uterus
S—16—1—RT: 15-20—Owner: Petrogalar Laboratories, Inc., Chicago, Ill.
Vitality for Victory
So—16—C—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
Handle With Care
S—16—RT: 25—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
Emergency Treatment
S—16—Owner: The Aetna Casualty and Surety Co., Hartford, Connecticut
A Dry Clinic on Sinus Thrombosis
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
Otoscopy in the Inflammations
So—16—C—RT: 30—Owner: The Doho Chemical Co., 58 Varick St., New York
Otitis Media
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
A Clinic on Acute Mastoiditis
So—16—C—RT: 35—Owner: The Doho Chemical Co., 58 Varick St., New York
Suppurative Petrositis, Meningeal
So—16—C—RT: 30—Owner: The Doho Chemical Co., 58 Varick St., New York
Preventing Blindness and Saving Sight
Silent—2 reels—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Behind the Shadows (Tuberculosis)
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Foods and Nutrition
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor
Care of the Premature Child
Louis Pasteur
Sound—2 reels—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

(Continued on Page 254)

For the infant deprived of mother's milk

SIMILAC

SIMILAR TO BREAST MILK

A powdered, modified milk product especially prepared for infant feeding, made from tuberculin tested cow's milk (casein modified) from which part of the butterfat is removed and to which has been added lactose, olive oil, coconut oil, corn oil, and cod liver oil concentrate.

ACCEPTED AMERICAN MEDICAL ASS'N. Council on Foods

Similac provides breast milk proportions of fat, protein, carbohydrate and minerals, in forms that are physically and metabolically suited to the infant's requirements. Similac dependably nourishes — *from birth until weaning.*

One level tablespoon of Similac powder added to *two* ounces of water makes *two* fluid ounces of Similac. This is the normal mixture and the caloric value is approximately 20 calories per fluid ounce.

M & R DIETETIC LABORATORIES, INC. • COLUMBUS, OHIO

(Continued from Page 252)

That Mother Might Live
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

They Live Again
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Tracking the Sleeping Death
Sound—1 reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Circulatory Control
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Feet
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Heart Disease
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Heredity
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Life of the Healthy Child
Silent—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Milk and Health
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Moving X-Rays
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Alimentary Tract
Sound—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

The Blood
Silent—¾ reel—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Cancer, Its Cure and Prevention
Sound (March of Time)—Joint Committee on Health Education, c/o Extension Division, University of Michigan, Ann Arbor

Health Heroes Series
Owner: Metropolitan Life Ins. Co., New York
Madame Curie and the Story of Radium
Edward Jenner and the Story of Smallpox Vaccination
Robert Koch
Florence Nightingale
Louis Pasteur
Walter Reed
Edward Livingston Trudeau

Artificial Pneumothorax in the Treatment of Tuberculosis
16 mm. sound. A demonstration and discussion of uses of pneumothorax in all its phases—X-ray, post-mortem specimens, and animated diagrams are used to illustrate the picture.—Owner: Tuberculosis Association, 403 Seymour Avenue, Lansing, Michigan

Internal Wiring of Jaw Fractures
With Note on External Bar Fixation. Drs. James Barrette Brown and Frank McDowell, Washington Univ. School of Medicine—Davis & Geck, Inc., Brooklyn, New York (Color)

Cancer of the Female Breast
Diagnosis and Treatment. Dr. Frank E. Adair, Memorial Hospital, New York—Davis & Geck, Inc., Brooklyn, New York (Color)

War Wounds
Skin Grafting of War Wounds and Observation of Healing. Dr. John M. Converse, American Hospital in Britain—Davis & Geck, Inc., Brooklyn, New York (Color)

Hernioplasty
For Direct Inguinal Hernia. Dr. Lawrence S. Fallis, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Surgery of the Common Bile Duct
Dr. Chas. B. Puestow, Univ. of Illinois School of Medicine—Davis & Geck, Inc., Brooklyn, New York (Color)

Intrathoracic Goiter
The Lahey Clinic, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Splenectomy
For Banti's Disease. Drs. Roy D. McClure and Lawrence S. Fallis, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Obstructive Resection
With Complementary Cecostomy. Dr. Fred W. Rankin, Lexington, Kentucky—Davis & Geck, Inc., Brooklyn, New York (Color)

Modified Mikulicz Operation
Right colectomy for carcinoma of the cecum. Dr. Richard B. Cattell, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Surgical Treatment of Varicose Veins
With High Ligation and Individualized Stripping and Excision. Dr. Henry N. Harkins, Detroit—Davis & Geck, Inc., Brooklyn, New York (Color)

Purposeful Splinting
Following Injuries of the Hand. Drs. Sumner L. Koch, Michael L. Mason, Harvey S. Allen, Chicago—Davis & Geck, Inc., Brooklyn, New York (Color)

Manchester Operation
(Donald-Fothergill operation) for Uterine Prolapse. Dr. Louis E. Phaneuf, Boston—Davis & Geck, Inc., Brooklyn, New York (Color)

Abdominal Complete Hysterectomy
For Fibroids. Dr. Arthur H. Curtis, Northwestern University Medical School. 3 reels showing a 2-stage thoracoplasty done by Dr. Overholt—Davis & Geck, Inc., Brooklyn, New York (Color)

"Lumbar Sympathetic Ganglionectomy"
Leriche approach.
Dr. Alton Ochsner—Tulane University School of Medicine. One reel, 15 minutes. Per booking, $1.00. C-242—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Scalenlotomy for cervical rib—Adson-Coffey operation"
Dr. Alton Ochsner—Tulane University School of Medicine. One reel, 16 minutes. Per booking, $1.00. C-221—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Cataract Extraction through vertical conjunctival slit"
Dr. Walter Moehle, Brooklyn. One reel, 12 minutes. Per booking, $.75. C-213—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Correction of Nasal Deformities"
Dr. J. Barrett Brown—Washington University School of Medicine. One reel, 15 minutes. Per booking $1.00. C-175—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

"Thyroglossal Cyst"
The Lahey Clinic, Boston. One reel, 10 minutes. Per booking, $.75. C-219—Davis and Geck, Inc., Brooklyn, N. Y. (Color)

Adrenal Cortical Insufficiency and Its Treatment
So—16—C—1—Owner: The Upjohn Company, 301 Henrietta Street, Kalamazoo, Michigan

White Battalions—Serving All Mankind
Owner: American College of Surgeons, 40 E. Erie Street, Chicago, Illinois

Thoracoplasty
1 reel (color)—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

The Schede Operation
1 reel (color)—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

Bronchopulmonary Lesions
1 reel—The Medical Field Guild, 114 East 57th Street, New York, New York (Rental)

The Early Development of the Rabbit Egg in Vitro
S—16—400′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$4.00

Tumor Cells and Macrophages in Tissue Cultures. Rat Sarcomas and Carcinomas
S—16—360′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$3.50

The Early Development of the Rabbit Egg
S—16—80′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$1.50

Early Divisions, 2-S Cells, of Living Monkey Egg in Vitro
S—16—80′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$1.50

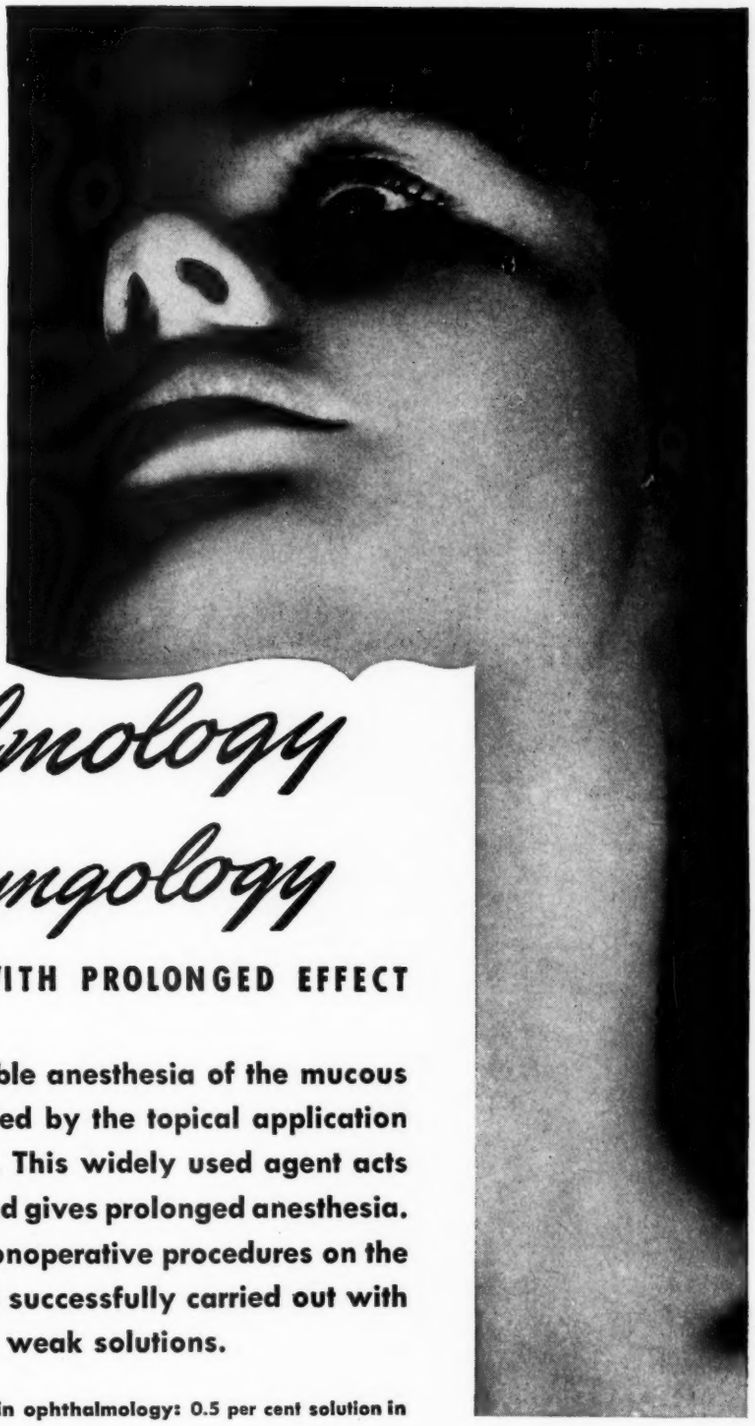
Dividing Cancer Cells in Vitro
S—16—160′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

Growth of Capillaries and Endothelium from the Subcutaneous Tissue of 7-Day Chick Embryos in 2-Day Cultures in Locke-Bouillon-Dextrose-Medium
S—16—140′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

Pinocytosis. Drinking by Cells
S—16—264′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$3.00

(Continued on Page 256)

This cherished symbol of distinguished service to our Country waves from the Winthrop flagstaff.



PONTOCAINE HYDROCHLORIDE IN *Ophthalmology* AND IN *Rhinolaryngology*

SURFACE ANESTHETIC WITH PROLONGED EFFECT

Dependable anesthesia of the mucous membranes is readily obtained by the topical application of Pontocaine Hydrochloride. This widely used agent acts quickly, penetrates deeply, and gives prolonged anesthesia. A variety of operative and nonoperative procedures on the eye, nose and throat may be successfully carried out with small quantities of relatively weak solutions.

HOW SUPPLIED: For surface anesthesia in ophthalmology: 0.5 per cent solution in bottles of ½ oz. and 2 oz.

For surface anesthesia in rhinolaryngology: 2 per cent solution in bottles of 1 oz. and 4 oz.

Not a narcotic

PONTOCAINE HYDROCHLORIDE

"Pontocaine" Reg. U. S. Pat. Off. and Canada, Brand of Tetracaine
(Parabutyl-aminobenzoyl-dimethyl-amino-ethanol)

WINTHROP CHEMICAL COMPANY, INC.

Pharmaceuticals of merit for the physician **NEW YORK, N. Y. • WINDSOR, ONT.**

(Continued from Page 254)

Dividing Normal Adult Rat Fibroblasts in Vitro
S—16—160′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$2.00

Normal and Abnormal White Blood Cells in Tissue Cultures
S—16—400′—Owner: The Wistar Institute of Anatomy and Biology, Woodland Avenue and Thirty-Sixth Street, Philadelphia, Pennsylvania
Rental for one day—$4.00

Cervicitis
So—16—C—RT:23—Attendant supplied with movie—Owner: A. C. Barnes Co.

Health Is a Victory, Story of Gonorrhea
So—35 and 16—RT: 10-12—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$5.00

In Defense of the Nation
So—35 and 16—RT: 10-12—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$5.00

Modern Diagnosis and Treatment of Syphilis
S—35 and 16—2—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$2.00

Gonorrhea in the Male
S—35 and 16—3—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental price per day—$3.00

Darkfield Diagnosis of Syphilis
S—16—1—Owner: American Social Hygiene Association, 1790 Broadway, New York
Rental per day—$1.00

Bacterial Endocarditis and Valvular Disease
S—35—Owner: American Heart Association, 1790 Broadway, New York
Rental fee is $1.00, plus transportation

Diagnostic Tests in Peripheral Arterial Disease
S—16—C—Owner: American Heart Association, 1790 Broadway, New York
Rental fee $4.00 per day

Fluroscopic Diagnosis of Cardiac Infarction
C—16—Owner: American Heart Association, 1790 Broadway, New York
Rental fee $2.00 per day

Valves of the Heart in Action
S—16—216′—Owner: American Heart Association, 1790 Broadway, New York
Rental $1.00 per week
S—35—540′—Owner: American Heart Association, 1790 Broadway, New York
Rental $1.00 per week

The Heart and Circulation
S—So—16—Owner: American Heart Association, 1790 Broadway, New York
Rental $3.00

The Human Heart
So—16—1—Owner: American Heart Association, 1790 Broadway, New York
Rental $3.00

The Heart Beat Mechanism in Health and Disease
S—16—One reel to eleven reels—Owner: American Heart Association, 1790 Broadway, New York
Rental $2.50 to $17.50

Edema, Cardiac and Renal
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Diagnosis of Urologic Conditions
S—16 and 35—4—RT: 45—Owner: Winthrop Chemical Co., 170 Varick St., New York

Novocain Anesthesia in Obstetrics
S—16 and 35—4—RT: 45—Owner: Winthrop Chemical Co., 170 Varick St., New York

Regional Anesthesia
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Malaria
S—16 and 35—4—RT: 35—Owner: Winthrop Chemical Co., 170 Varick St., New York

Human Sterility
S—16 and 35—3—RT: 30—Owner: Winthrop Chemical Co., 170 Varick St., New York

Acute Appendicitis
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Amyotonia Congenita
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50

Cardiac Irregularities
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Cataract Extraction
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00

Development of Fertilized Rabbit's Ovum
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Diagnosis and Treatment of Infections of the Hand
S—16—3—Owner: Eastman Kodak Co., Rochester, New York
Rental $9.00
S—35—3—Eastman Kodak Co., Rochester, New York
Rental $15.00

Ectopic Heart
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75

Gold Ball Implantation
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25

Indirect Inguinal Hernia
Surgical Anatomy (Reel 1)
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00
Clinical Aspects of Hernia (Reel 2)
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75
Operative Repair of Hernia (Reel 3)
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25
S—35—¾—Eastman Kodak Co., Rochester, New York
Rental $3.75
Reels 1, 2 and 3 complete
S—16—3—Eastman Kodak Co., Rochester, New York
Rental $7.00
S—35—3—Eastman Kodak Co., Rochester, New York
Rental $12.00

Intestinal Peristalsis
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00

Prostatic Hypertrophy
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Rabies
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50
S—35—½—Eastman Kodak Co., Rochester, New York
Rental $2.50

Simple Goiter
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Suprapubic Cystotomy
S—16—¾—Owner: Eastman Kodak Co., Rochester, New York
Rental $2.25

Technique of Blood Transfusion
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Tests of Vestibular Function
S—16—1—Owner: Eastman Kodak Co., Rochester, New York
Rental $3.00
S—35—1—Eastman Kodak Co., Rochester, New York
Rental $5.00

Todd-Parker Tucking Operation
S—16—½—Owner: Eastman Kodak Co., Rochester, New York
Rental $1.50

Treatment of Normal Breech Presentation
Adrian, Michigan.
S—16—2—Owner: Eastman Kodak Co., Rochester, New York
Rental $6.00
S—35—2—Eastman Kodak Co., Rochester, New York
Rental $10.00

Choose to Live
So—35—1—RT; 15—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

(Continued on Page 258)

Bismuth

IMPORTANT IN THE SUCCESSFUL TREATMENT OF *Syphilis*

Especially effective where arsenic is not well tolerated or is otherwise contra-indicated. Particularly recommended in cases resistant or intolerant to arsphenamines and mercury. In many cases a reversal of Wassermann or Kahn tests may be accomplished by the use of Bismuthyl Sodium Tartrate alone. Of value especially where rapid distribution and saturation with bismuth is considered desirable.

Cheplin's Bismuthyl Sodium Tartrate for intramuscular use has certain definite advantages in the administration of bismuth therapy. Briefly these are: (1) *High metallic bismuth content;* (2) *Water soluble* and compatible with tissue fluids. Absorbed with a minimum of leucocytic infiltration and local irritation. Injection is quite free from pain; (3) Prompt absorption; (4) Rapid therapeutic results. Usually spirochetes disappear rapidly from early lesions and both primary and secondary manifestations clear up promptly.

Dosage: 2cc. administered bi-weekly for 6 to 10 weeks. Literature and samples on request.

Cheplin's

BISMUTHYL SODIUM TARTRATE

(For Intramuscular Use)

1½% solution

In 2cc. Ampules, 12, 25 and 100 per box. Also in 30cc. and 60cc. Vials.

3% solution

Recommended for cases requiring a higher bismuth content.

In 2cc. Ampules, 12, 25 and 100 per box. Also in 30cc. and 60cc. Vials.

BISMUTHYL POTASSIUM TARTRATE

(For Intramuscular Use)

2½% solution

In 2cc. Ampules, 12, 25 and 100 per box. Also in 30cc. and 60cc. Vials.

Cheplin's

QUALITY
PURITY
INTEGRITY

QUALITY
PURITY
INTEGRITY

PHARMACEUTICALS and BIOLOGICALS

CHEPLIN BIOLOGICAL LABORATORIES, INC.

SYRACUSE, NEW YORK

Aerial View

The Sawyer Sanatorium offers facilities for the treatment of patients suffering from Nervous Diseases, Mental Disorders, Psychoneuroses, including Involutional Psychoses; Arterio-Sclerotic, Senile and Adolescent Mental Disorders; Paralyses; Cardiac, Cardio-renal and Hypertensive Nervous Conditions; and the various manifestations associated with them.

Housebook giving details, pictures and rates will be sent upon request.

Telephone 2140

Address:

SAWYER SANATORIUM

White Oaks Farm
Marion, Ohio

(Continued from Page 256)

Choose to Live
So—35—2—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

Choose to Live
So—16—2—RT: 18—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Enemy X
So—35—1—RT: 10—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Enemy X
So—16—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Conquering Cancer
So—16—1—RT: 7—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York

Living Cells
S—16—2—RT: 20—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

Living Cells
S—16—3—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $3.00 plus shipping costs

Living Cells
S—35—2—RT: 30—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

Living Cells
S—16—1—RT: 10—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Living Cells
S—35—1—RT: 15—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $1.00 plus shipping costs

Living Cells
S—16—2—RT: 18—Owner: The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York
On Loan: $2.00 plus shipping costs

"The Stimulation of Capillary Circulation with MECHOLYL CHLORIDE (Acetyl-beta-methylcholine chloride) by the Method of Ion Transfer (Iontophoresis)"
S-16-Kodachrome—375′. Owner: Peripheral Vascular Clinic, New York Postgraduate Hospital, New York City.

"Anesthesia with VINETHENE in Short Surgical Procedures and for Induction Prior to Ethyl-Ether"
S-16-Kodachrome-2-350′-250′. Owner: Abington Memorial Hospital, Pfeiffer Surgical Clinic, Abington, Pa. Dr. Ralph W. Maio, Director of Anesthesia

SOCIAL INSURANCE

1. *What is compulsory social insurance?*

A plan operated by the government which, through compulsory taxes on wages and payrolls, seeks to distribute the expense of old age, unemployment, sickness and accident disability, medical and hospital care, death, and related human hazards.

2. *How is a government scheme of compulsory social insurance financed?*

Usually by joint taxes on the employe and the employer plus contributions by the government. The employer passes along his tax to the consumer. The government passes its share to the taxpayer. In the final analysis, the taxpayer, who also is the consumer and the employe, pays the entire cost of government compulsory social insurance.

3. *What would a comprehensive government compulsory social insurance scheme cost American wage earners?*

At least 20 per cent of their wages, assuming minimum benefits for the coverages listed in Question 1.

—*Insurance Economics Society of America.*

The JOURNAL
of the Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL
VOLUME 42 APRIL, 1943 NUMBER 4

Poisoning in Infants Due to Common Cough Syrups*

By James L. Wilson, M.D.
Detroit, Michigan

JAMES L. WILSON, M.D.
A.B., Colby College, 1920. M.D., Harvard Medical School, 1926. Medical Director, Children's Hospital of Michigan. Professor of Pediatrics, Wayne University College of Medicine. Member: American Pediatric Society, Society for Pediatric Research, American Academy of Pediatrics, Michigan State Medical Society.

■ THE admission to the Children's Hospital of Michigan within twenty-four hours of three babies poisoned by morphine, one of them fatally, from medications given according to their physicians' directions, prompts this brief paper. Most instances in infants of serious narcosis other than those due to ordinary accidental poisoning can be attributed not to idiosyncrasy on the patient's part but to the inexperience or carelessness of physicians who prescribe preparations containing morphine or other opium derivatives without first calculating the proper dose according to the baby's weight.

Case Reports

Case 1.—This was a fifteen-months-old boy weighing 19 pounds. After two days of apparent respiratory infection and cough with some difficulty in breathing, the child was seen by his physician, who prescribed some sulfonamides plus a teaspoonful of a proprietary reddish cough medicine to be given every three hours. After the second dose the baby became drowsy, could not be aroused and didn't recognize his parents. The parents noted and spontaneously reported that the pupils became quite small although usually the baby's eyes looked very big. The child continued limp and impossible to arouse during the day of admission. On admission the baby had a temperature of 103, was comatose and had small pupils. Breathing was irregular and shallow over the lungs. X-ray confirmed the diagnosis of pneumonia. The baby was given oxygen and sulfathiazole and improved after the first day. The medicine given was reported by the druggist to contain ¼ grain of morphine to an ounce.

Case 2.—This was a seven-weeks-old infant weighing 10 lbs. The baby seemed well until five days before admission to the hospital, when he developed a cough which, after two days, became so bad that a doctor was called. An orange-colored medicine was prescribed which helped his cough, but the parents noted that the baby became very sleepy. Medicine was given according to directions every four hours day and night. Two days before admission the baby started to vomit. The day before admission he was noted to be very sleepy indeed and to become pale and of a bluish color. The baby was finally brought to the hospital on the doctor's orders. The baby on admission was breathing very irregularly. The pupils were small and did not react to light. There were fine crackling rales throughout both chests. He was breathing shallowly with long period of apnea. It was determined that the baby was getting the following prescription: Ethyl morphine gr. ¼, K-guaiacol sulfonate gr. 8, K-citrate gr. 20, and citrate acid gr. 6 made up to an ounce. The baby had been given one-half teaspoonful of this preparation twelve times. X-ray showed bronchopneumonia in baby. Oxygen and carbon dioxide was administered. The temperature became normal in one or two days and he recovered satisfactorily.

Case 3.—This was a three-weeks-old female weighing 7.5 pounds. Four days before admission to the hospital, this infant developed a slight cough which persisted until twelve hours before admission, when her physician prescribed a cough mixture which was red and smelled like cherries. One teaspoonful of this was to be given the baby every four hours. After the first dose the baby slept through the night and did not wake up for her feeding. It was noted by the parents that the baby did not breathe regularly. The mother was unable to arouse the baby for the 6 a. m. feeding and the milk ran out of the side of her mouth when the nipple was inserted and attempt made to feed her. However, the mother managed to give the baby another

*From the Department of Pediatrics, Wayne University College of Medicine, and the Children's Hospital of Michigan, Detroit, Michigan.

dose of the medicine by "forcing it down." The baby slept all morning and was noted to be slightly blue. At 2 p. m. attacks of blueness seemed to become worse and the baby "stopped breathing for four minutes." Her arms and legs became stiff and the parents thought the baby was having convulsions. The baby was seen by a physician who gave her an injection of alpha-lobeline about every three minutes for several times. On admission to the hospital the heart sounds were not audible and only occasional respiratory gasps were observed. After being given adrenalin in the heart and intravenous glucose, respirations became more regular but continued gasping. Caffeine, oxygen and carbon dioxide were administered. Several convulsions of slight severity were noted. The baby died a few hours after admission. It was found that the baby had been given a cough medicine which contained ¼ grain of morphine per ounce as well as several other non-narcotic ingredients. The formula reported by the druggist is as follows:

Ephedrine hydrochloride	gr. ½
Pot. guaiacol sulfonate	gr. 8
Ammonium chloride	gr. 8
Chloroform	m 1
Antimony pot. tartrate	
Morphine sulphate	gr. ¼
Syrup of cherry	1 oz.

Considering these cases which we have presented, it will be noted that in Case 1 the medication contained ¼ of a grain of morphine per ounce or a 32nd of a grain per teaspoonful. This may seem a very small dose. However, the baby's weight was 19 pounds, and, since this is approximately one-eighth of the weight of an average adult, the equivalent dosage in an adult would be 8 times 1/32 or ¼ grain. The baby therefore received an equivalent of ¼ grain of morphine in two doses at a three-hour interval and the reaction to morphine which occurred cannot be considered unusual. In this case the baby was not considered at any time in danger of death, but there can be no doubt that the dosage was dangerous and that the physician was ill-advised to prescribe it, particularly a second dose so soon without personally observing the baby's reaction to the first.

In Case 2 the baby was given one-half a teaspoonful of a preparation which contained 1/32 grain of ethyl morphine in a teaspoonful or he received 1/64 of a grain per dose. This again seems very small. However, the baby weighed only 10 pounds or, roughly, one-fifteenth of an average adult, which would make the dosage actually administered equivalent to about ¼ of a grain for an adult. That this repeated every four hours for 12 doses produced the result that it did is not surprising. The baby's condition was considerably more dangerous than that in Case 1. It probably would have been worse if the baby had not reacted by vomiting, although we are not at all sure how much of the medication was lost in this manner.

In Case 3 the baby weighed 7.5 pounds or approximately one-twentieth of an average adult weight. The medication given contained 1/32 of a grain of morphine per teaspoonful, so that the baby received the equivalent of approximately ⅔ of a grain of morphine to an adult and received a second dose while he was obviously greatly depressed by the first one. The fatal outcome is not surprising.

These three cases are, unfortunately, not unusual except that they happened to be admitted to the hospital during one day. Similar poisonings with codeine occur. Overdosage in small children by salicylates and other common drugs are by no means unknown.

Dosage of Narcotics in Infants

There is surely no need in these cases to surmise any idiosyncrasies to opiates or to explain the bad reactions as illustrations that infants are particularly susceptible to the influence of morphine. Idiosyncrasies or hypersensitivity to morphine occurs in infants and children as they do in adults. Traditionally such hypersensitivity has been considered more frequent in infants. No figures as to that are obtainable, however, and in the author's experience such sensitivity is extraordinarily rare. Morphine may be as valuable in infancy as in any other period, though the indications are probably not as frequent. The general contra-indications, such as cerebral depression or respiratory obstruction, are the same in infancy as at other ages, but otherwise there is no reason why morphine should not be given to an infant where sufficient pain or distress indicates it. One need worry even less about the effects of morphine in infants and young children since the danger of addiction to a habit is slight. However, morphine as any other drug is dangerous in infants when the dose is too large. The safest way to calculate dosage in infants for most medications, and certainly for the opium series, is on the basis of weight and a simple rule is to multiply the dosage one would consider reasonable for an adult by the fraction representing the portion of the baby's actual weight to

that of a 150-pound adult. A simple problem in arithmetic thus makes a proper dosage clear.

$$\text{Baby's dose} = \text{adult dose} \times \frac{\text{baby's weight}}{150}$$

The initial dose of morphine in infants and children should not be more than the equivalent of 1/8 of a grain to an adult. Later, after proper observation for evidence of sensitivity, larger doses may be given as need indicates. Young's Rule, that is, the age of a child divided by the age plus 12 multiplied by the adult dosage is a convenient formula and a safe one for older children, but it is not applicable to infancy.

$$\text{Child's dose} = \text{adult dose} \times \frac{\text{age}}{\text{age} + 12}$$

No system of dosage according to months of age is as safe as a dosage calculated from actual weight. An approximate weight is almost always obtainable even if the problem of actually weighing the child is impractical at the time of medication.

Conclusions

The use for infants of cough syrups containing opiate derivatives, whether morphine, codeine or others, without exact knowledge of the concentration of these drugs and careful calculation of the dosage according to the weight of the patient is inexcusable. Common cough syrups containing opiates in concentrations negligible in their effects on adults are highly potent and dangerous for infants.

MSMS

HIGH COST OF WARTIME ILLNESS

Approximately 15,000 bombers and forty-eight battleships could have been built with the days of labor lost through industrial sickness in the past year, Dr. Cassius Watson, medical director of the American Telephone & Telegraph Company, declared at a meeting at the Hotel Bossert, Brooklyn. His audience included sixty-four graduate medical students from six States, at the opening of an industrial medicine course given by Long Island University.—*New York Sun*, November 3, 1942.

Tertiary Syphilis of Skin and Bone

Co-Existing with Granulomatous Halogen Skin Eruption*

By Herman Pinkus, M.D.
Monroe, Michigan
and
Louis Zlatkin, M.D.
Detroit, Michigan

HERMAN PINKUS
M.D., University of Berlin, 1930. M.S., University of Michigan, Ann Arbor, 1935. D.N.B., 1936. Diplomate, American Board of Dermatology and Syphilology, 1940. Resident in Dermatology and Venereal Diseases, University of Breslau, 1930-1933. Research fellow in Experimental Cytology, Department of Surgery, Ann Arbor, 1934-1936. Research fellow in dermatopathology, Wm. J. Seymour Hospital, Eloise, Mich., 1936-1938. Fellow, American Academy of Dermatology and Syphilology. Dermatologist, Monroe Hospital, Dermatopathologist, North End Clinic, Detroit.

LOUIS ZLATKIN
A.B., University of Michigan, 1931; M.D., University of Michigan, 1935. Associate in Dermatology and Syphilology, North End Clinic.

The patient was a tall and strongly built woman who had received irregular antisyphilitic treatment for several years. Recently, she had developed granulomatous and partly fungating skin lesions which progressed in spite of bismuth injections. She also had subacute osteomyelitis and periostitis of the tibia.

Antisyphilitic treatment was discontinued and the patient put on a high salt diet. Within a few weeks, some skin lesions disappeared, others lost their fungating character, then remained stationary. The bone lesion flared up. Thereupon, vigorous antiluetic therapy was instituted and caused quick resolution of the remaining pathology.

The authors call attention to three important rules.

1. Not every skin affection in a syphilitic is of spirochetal origin.
2. A history of recent antisyphilitic treatment does not preclude the presence of active syphilitic lesions.
3. Standard antisyphilitic therapy must be adjusted to the size of the patient.

■ THE following case appears worth while reporting because the concomitant presence of two granulomatous lesions presented a diagnostic puzzle. Both cutaneous syphilides and halogen granulomata of the skin co-existed despite the treatment for the former.

O. B., a colored woman, thirty years of age, sought treatment at the North End Clinic for skin lesions of six months' duration on the face and arms, and for a painful swelling of the left ankle. She gave a history of having received antisyphilitic treatment at irregular intervals for several years, and regularly for the last preceding year. During this time she had developed new skin lesions while the old ones did not heal.

A physical examination which was done on November 22, 1938, revealed a tall woman of strong build, height five feet 10 inches, weight 200 pounds. Her subcutaneous fat was well developed, but not excessive. A general physical examination revealed nothing of

*From the Dermatology Department, North End Clinic, Detroit, Michigan.

importance, particularly no evidence of syphilis of the central nervous system or other internal organs. There was an ill-defined firm swelling of the right leg just above the ankle, the skin was slightly reddened, and there was deep tenderness to palpation. Skin lesions were present on the face, both arms and sacral region. There was a roughly circular fungating lesion of about 3 cm. diameter involving the right side of the nose and part of the upper lip. A thin purulent exudate could be expressed from between the rather soft warty granulations. A similar lesion of 3 cm. diameter was present on the flexor surface of the right forearm. The left forearm showed an annular lesion of 1.5 cm. diameter with firm nodular border on three sides and superficial scar formation in the center and on the remaining side. There was a handsized area of irregular scarring with nodular infiltration of the periphery in the sacral region.

Laboratory examination revealed the following: The urine was normal. The Kahn reactions on the blood were positive. Old Tuberculin test (1:1000 dilution intradermally) was highly positive. Examination for tubercle bacilli was negative in direct smears of pus, and by culture from an excised piece of the lesion on the right forearm (Detroit Board of Health).

The microscopic examination of a biopsy from the right forearm showed pigmented skin containing normal histology in one-third of the length of the section. The remaining two-thirds were taken up by a dense granulomatous infiltration that occupied the whole thickness of the skin from the surface down to the sweat glands. The infiltration was very vascular and consisted mainly of histiocytes and small round cells. Accumulations of polymorphonuclear leukocytes formed small abscesses in the upper half of the cutis, while nests of plasma cells in dense arrangement formed a ring in the deep peripheral parts. A few eosinophilic cells were present. There were no giant cells. The most striking feature was the tremendous irregular proliferation of the epidermis, which sent strings and nests of epithelial cells deep down into the cutis. Mitoses were frequent, and the epithelial structures often engulfed remnants of elastic fibers where these had not been entirely destroyed by the inflammatory process. The surface was covered by a thick crust of epithelial and leukocytic debris with several abscesses opening through the epidermis. The cutis in the neighborhood of this granulomatous mass showed more or less dense lymphocytic collars around the blood vessels, particularly the small arteries (*See* microphotographs).

From the biopsy a diagnosis of chronic granulomatous inflammation was made. The findings were not characteristic of tuberculosis. Yet the marked atypical proliferation of the epidermis in the absence of giant cells and demonstrable micro-organisms favored a diagnosis of drug eruption due to iodides or bromides. However, the presence of large numbers of plasma cells and the arteritis in the border of the lesion suggested a syphilitic component.

Roentgen ray examination of the lower extremities indicated the left leg to be normal. However, there were changes in the lower end of the right tibia about 8 cm. from the ankle joint consisting of increased density and small circular areas of rarefaction. There was a complete change in the architecture of this area with thickening of the bone and periosteum. The appearance was that of a chronic osteomyelitis.

This patient, who gave a long history of syphilis, had skin lesions some of which looked like typical tertiary syphilides of the tuberoserpiginous type. In addition, there was clinical and roentgenologic evidence of a chronic osteomyelitis of the right tibia, and the orthopedic consultant was of the opinion that this was most likely of syphilitic origin.

Other skin lesions resembled more closely those fungating granulomata which are seen most commonly after the prolonged use of bromides, but which occasionally result from iodides. Biopsy of one lesion tended to confirm the impression of halogen eruption. On the other hand, one of these lesions was situated at one of the sites of predilection for superficial tertiary syphilides, the nasolabial region.

Matters were complicated by the fact that the patient, according to her story, had received routine antisyphilitic treatment at a public clinic for one year and that during this time the presumably syphilitic lesions had not subsided, but had progressed and new lesions had developed. This occurred in spite of the fact that the cutaneous lesions present were of a type which usually responds rapidly to even small doses of any antisyphilitic drug.

Three diagnostic possibilities were considered in this case: Therapy-resistant syphilis with atypical luetic lesions. Halogen eruption, probably due to the intake of potassium iodide. And, a combination of tertiary syphilides and iodide granulomata. A therapeutic test appeared to offer the best opportunity for a solution to the puzzle, and it was deemed advisable to rule out the drug factor first. The patient was advised to discontinue all oral medication and to substitute plain table salt for the iodized salt of her diet.

Starting on December 6, 1938, 30 grains (2 gms.) of sodium chloride, in tablet form, were administered daily for one week, following which the dose was raised to 150 grains (10 gms.) daily. The skin lesions appeared less succulent by the end of the first week. Thereupon all antisyphilitic treatment was discontinued. After one month of the higher dose of salt, the biopsied lesion on the right forearm had disappeared completely leaving a smooth scar. Most of the other lesions had flattened out considerably.

On February 3, 1939, after three more weeks of the same regime, the patient complained of greatly increased pain in her right leg, which was more swollen. The entire lower half of the tibia was very tender on pressure. Roentgen ray examination at this time showed definite changes in the architecture of the lower half of the tibia. There was some eburnation present and the outline of the tibia was irregular. This appearance was again diagnosed as chronic osteomyelitis.

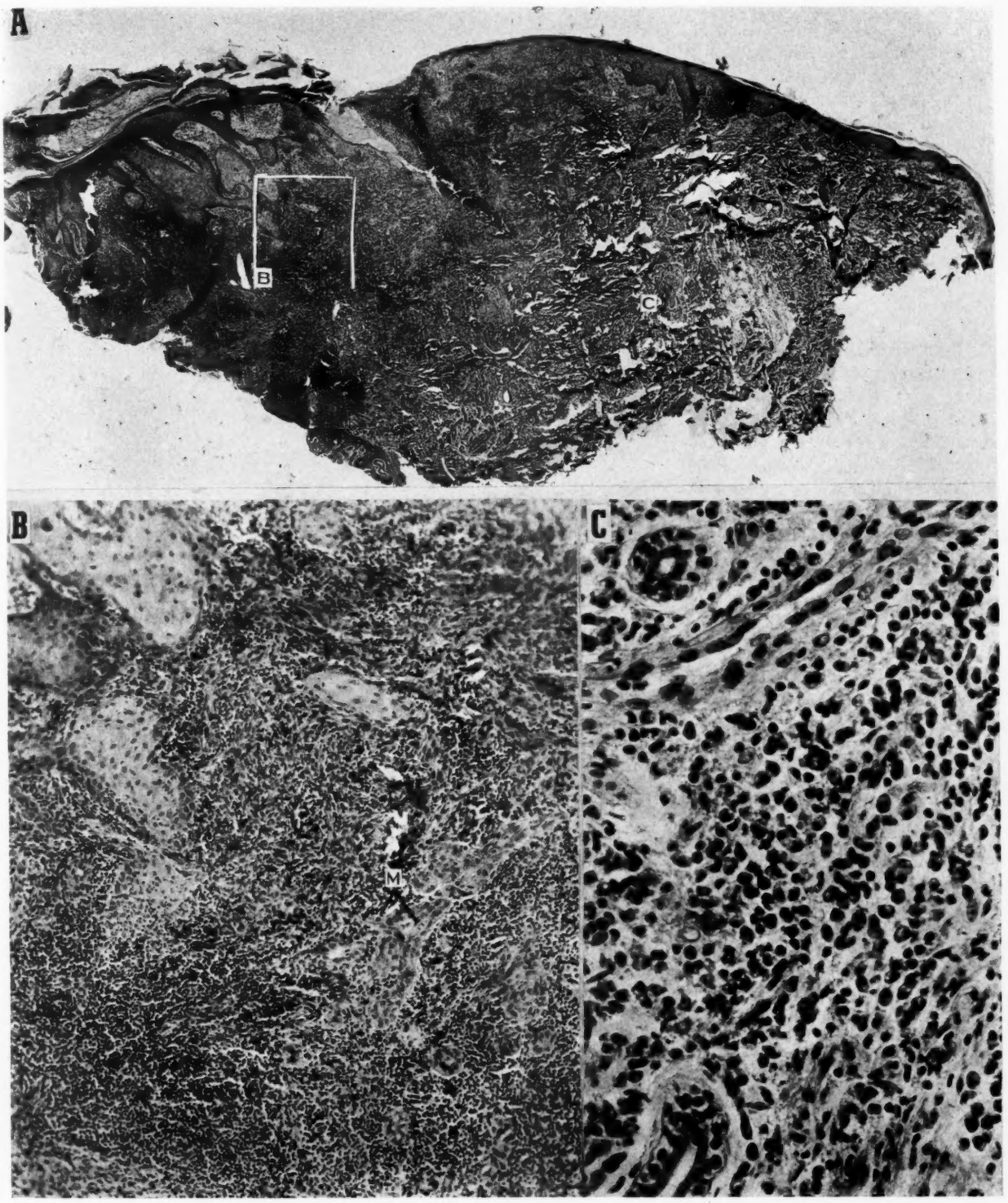


Fig. 1. *A*. Low power view of a section from a fungating lesion of the right forearm. Hematoxylin-Eosin. x 16. Normal skin at right. Dense granulomatous infiltration, ulceration, and increasingly atypical epithelial proliferation toward the left. The two squares indicate the fields of *B* and *C*.

B. Medium power view of part of the section shown in *A* x 100. Very dense, mixed cellular infiltration, numerous capillary blood vessels, and "pseudocarcinomatous" epidermal proliferation typical of halogen granulamos. "M" indicates two mitotic figures in one of the epithelial islands.

C. High power view of the field from the periphery of the lesion shown in *A* x 350. Numerous plasma cells with eccentric dark nuclei in the infiltration surrounding a sweat coil. Note the endothelial proliferation of the small artery. This field has the histologic characteristics of a syphilitic granuloma.

At the same time there had been no appreciable improvement of the skin lesions for several weeks. The lesion on the nose was now firm, much flatter than before and dry, but the surface still was hyperkeratotic and there was definite nodular infiltration. The kidney shaped lesion of the left forearm was even larger in diameter than when first seen.

It was now concluded that the patient indeed had had tertiary syphilides and drug granulomata simultaneously and even in the same locations; that the drug component by now had been eliminated; and the syphilitic process was advancing. Sodium chloride was then discontinued, and the patient was put on intensive antisyphilitic treatment with both bismuth subsalicylate intramuscularly and neo-arsphenamine intravenously.

By March 14, 1939, that is, after six weeks of antisyphilitic treatment all skin lesions had disappeared completely except for scars. The swelling of the leg had largely subsided and there was no pain. Combined, and later alternating treatment with bismuth subsalicylate and neo-arsphenamine was continued until March, 1940. Spinal puncture on April 19, 1940, gave essentially normal findings except for a positive Pandy reaction. A Kahn test on the blood serum was doubtful-positive at that time.

Through the courtesy of the Detroit Board of Health, the Hamtramck Board of Health and the Detroit Receiving Hospital we were able to trace this patient's history more closely. This investigation modified some of our first impressions without making the case less interesting.

The patient had had repeated negative Kahn tests at the Detroit Board of Health between 1931 and 1934. She had florid secondary syphilis (Condylomata lata) and a positive Kahn test in January, 1935. She was treated with neo-arsphenamine and mercury salicylate until May, 1935, when the Kahn test on the blood was negative. Treatment was continued with mapharsen and bismuth subsalicylate and she had negative Kahn tests in January and April, 1936. This patient did not continue regular treatment, however, and was found to have a serologic relapse in June, 1936. The Kahn test was again positive in August, 1936.

She received five thiobismol injections between September and December, 1936, and fifty-five more at irregular intervals between May, 1937, and December, 1938. A Kahn test on the blood November 22, 1937 was positive. On April 7, 1938, she was admitted to Receiving Hospital complaining of pain over the right tibia of six weeks' duration. A Roentgen ray diagnosis of early osteomyelitis was made. When the process progressed slowly and the Kahn test on the blood was still positive, a final diagnosis of syphilitic periostitis of the right tibia was made.

Comment

Two well-known but often overlooked facts were emphasized by the case history. First, not every granulomatous skin lesion in a syphilitic is of spirochetal origin; and, second, even a treated syphilitic may have active luetic manifestations. The extraordinary feature of the case is the development of syphilitic and medicamentous granulomata at the same time and even in the same location.

The diagnosis of a halogen eruption is strongly suggested, in our opinion, by the clinical and histologic features and by the rapid improvement following discontinuance of all possible sources of iodides and bromides and the administration of sodium chloride. It was presupposed that the patient had received potassium iodide but this was not borne out by our subsequent investigations. The patient had taken some patent medicine, but a sample of this did not give positive reactions for either of the halogens. No evidence of iodine in the urine could be found on examination December 6, 1938. The bismuth preparation which had been administered to the patient did not contain iodine.

Iodized salt then remains as the only likely source of iodine ingestion providing the patient did not hold back any pertinent information. This possibility must be kept in mind as the history given by her proved very unreliable on careful check up.

The diagnosis of tertiary syphilides is also well supported by the clinical features; the location at sites of predilection (nasolabial and sacral regions); the combination with syphilitic osteomyelitis, and the prompt response to persistent antisyphilitic therapy.

The duration of the patient's infection (negative serology up to 1934, secondary lesions in January, 1935) is fairly short for the development of tertiary manifestations. Syphilitic osteomyelitis, however, is well known as a feature of the tertiary stage of the disease. The early development of the skin lesions seen in this patient may indicate a personal predisposition for granulomatous reaction and may help explain the peculiar clinical picture.

The combination of syphilis and halogen eruption in one lesion, as it was present apparently in this patient, on the nose and in other locations, is indeed unusual. It would have been even more unusual if it could have been proved definitely that the iodides, ordinarily so effective an antisyphilitic drug, were the causative factors. No similar case was located in the literature. Some helpful considerations, however, are these:

Iodine eruptions are not uncommon side effects in antisyphilitic therapy. Both halogen eruptions

and particularly tertiary syphilis have a known tendency to localize at sites of previous trauma, be it mechanical or chemical. Cinnabar-tattooed areas of the skin are usually spared in syphilitic exanthemata because of their mercury content. However, there are two cases on record in which they were preferred sites of syphilitic lesions.[1,2] Finally, it has been shown that administration of potassium iodide, even to normal subjects, caused the skin to form tuberculoid reactions to luetin (extract of syphilitic tissues rich in spirochetes).[3,4]

A last point which merits discussion is the question of "therapy resistance." There is no doubt in view of our later findings that the term would be misapplied in this case. The patient, due to her own negligence, had received objectively insufficient treatment. However, one is not always in a position to verify a patient's statement that he has received antisyphilitic therapy regularly for one year during which time new lesions developed. It is important to bear in mind in such cases that the therapy may have been inadequate either because the patient was negligent or because the physician following accepted routine gave too small doses. While fortunately, many syphilitic skin lesions respond to surprisingly small doses, there are other lesions which need considerably more than the recommended "routine." In particular, large patients, as in our case, where the patient was taller and heavier than many men may require computation of dosage which is adequate for their weight.

Summary

The presumptive diagnosis of the combination of tertiary syphilis and drug eruption in a patient who had received antisyphilitic therapy was verified by therapeutic tests for lues and iododerma. The case is presented for a discussion of the pathogenetic possibilities and as an appeal for exercising great care before arriving at diagnostic and therapeutic conclusions in seemingly confusing cases of syphilis.

Bibliography

1. Bernheim, W., and Glueck, A.: Beitrag zur Frage: Syphilis und Tätowierung. Dermat. Zentralbl., 15; 162, 1912.
2. Florange: Beitrag zur Frage: Tätowierung und Syphilis. Dermat. Ztschr., 16:783, 1909.
3. Kolmer, J. A., and Masunaru, T., and Broadwell, S. T., Jr.: The effect of potassium iodide in the luetin reaction. Jour. A.M.A., 67:718, 1916.
4. Sherrick, J. W.: The effect of potassium iodide in the luetin reaction. Jour. A.M.A., 65:404, 1915.

Management of Skull Fractures*

By Harry E. Mock, M.D.
Chicago, Illinois

M.D., Rush Medical College, 1906. Associate Professor of Surgery Northwestern University Medical School; Senior Surgeon St. Luke's Hospital, Chicago; Fellow American Board of Surgery, American College of Surgeons; Chicago Surgical Society; Chicago Institute of Medicine; American Association of Surgery of Trauma, and others. Author of many surgical subjects. Exhibitor in the Scientific Exhibits of the American Medical Association from 1931 to 1938 on the subject of Skull Fractures and Craniocerebral Injuries.

Craniocerebral injuries in the United States occur to the extent of more than half a million victims a year. Approximately 65 per cent of the deaths resulting from skull fractures occur in the first twenty-four hours following the injury. The widespread distribution and the early occurrence of death will always make this a problem for the general physician and surgeon. The author collected and analyzed 3,300 cases of consecutive proved skull fractures from 1929 through 1934. The mortality rate varied from 25 per cent to 49 per cent during that period. The last ten years has brought forth abundant teaching of better management. Has it reduced the mortality rate? Is there room for still further improvement? These and other questions are answered in the author's second nationwide survey of 3,200 consecutive proved skull fractures.

■ The intracranial pathologic condition and not the fracture in the skull guides the management. Comparing 100 cases of head injury with skull fractures with 100 cases without fractures the mortality rate in the former is approximately 10 per cent greater. Therefore, in collecting the statistics, proved skull fractures were used to secure cases of comparable seriousness.

Prior to ten years ago great controversy waged among leading authorities concerning various procedures of management in acute craniocerebral injuries. In recent years there is more unanimity of opinion especially concerning adequate dehydration and the use of spinal drainage when indicated by the signs and symptoms. The author has made a hobby of this subject for the last fifteen years and has talked and given exhibits on skull fractures in all parts of the country. In addition to his several published articles, literature has been fortunate to have excellent articles concerning the management of craniocerebral injuries by many other authorities. Has all of this

*Read before the Seventy-sixth Annual meeting of the Michigan State Medical Society at Grand Rapids, September 19, 1941.

COMPARISON OF GOOD AND POOR MANAGEMENT.

Management Used	Good Group Per Cent Used	Poor Group Per Cent Used
1. Careful observation and charting the course	85%	32%
2. Do nothing but rest only (Author's Group I—6%)	8%	18%
3. Hit-or-miss type of treatment Methods used inadequate	4%	66%
4. Dehydration used—50% glucose (82%) 50% sucrose (18% of all cases) (Author's Group II—50%)	36%	50%
5. Spinal puncture (Author's Group III—35%)	50%	18%
6. Spinal drainage done early (first twenty-four hours) and adequate amount drained (20 c.c. to 60 c.c.)	78%	24%
7. Operations done (Author's Group IV—9%)	5.5%	11%
8. Good operative judgment used as to why to operate and when	75%	40%
9. Shock rules observed: Don't x-ray at once Don't operate early Don't reduce associated fractures or operate other associated injuries in presence of cerebral shock Don't add insult to injury	90%	50%
10. Oxygen and blood transfusion	10%	1%
11. Mortality rates (Author's in 400 cases—16.8%)	17–21%	29–42%

educational work resulted in the lowering of mortality rate in head injuries?

From 1929 to 1935 the author studied consecutive proved skull fracture records collected from over 100 surgeons and from eighteen different hospitals in all parts of the country. He has exhibited the methods of management used in these cases and the resulting mortality rates on several occasions. In order to answer this question of whether educational propaganda has reduced the mortality rate he made a second survey of consecutive proved skull fractures covering the five-year period from 1935 to 1940.

The accompanying table shows the gross results in these two surveys.

Comparing the types of management in the four hospitals (373 consecutive cases) where good observation and good treatment was used with the eleven hospitals (750 consecutive cases) where poor observation and treatment was the rule, one finds the answer to the question—How can the high mortality rate in skull fractures be reduced?

In between the good management hospitals and the poor management hospitals there were five hospitals representing 2,206 cases where average treatment prevailed. The mortality rates in these hospitals varied from 22 to 28 per cent.

The accompanying table sets forth the major types of management which will raise or lower the mortality rate in skull fractures. Furthermore it shows in what percentage of cases the various types of management are used in the good group hospitals as compared with the poor group hospitals. Herein we have answer to the above question.

MSMS

Relationship of Anesthesiology to Medical Practice*

By Paul M. Wood, M.D.
New York, New York

B.S., Columbia College, 1917; M.D., College of Physicians and Surgeons, 1922. Assistant Clinical Professor of Anesthesia, New York Medical College; Consulting and Attending Anesthetist to several New York hospitals; Fellow American Society of Anesthetists; Diplomate and Secretary-Treasurer, American Board of Anesthesia.

The centennial of a major specialty in medicine is marked by a brief consideration of the dynamic development of Anesthesiology since Long's use of ether on March 30, 1842. Emphasis is laid on the discoveries through research, teaching, and clinical application. Its present integration with such associated fields as physics and chemistry, physiology and pharmacology, as seen in the laboratory, medical school, hospital and office, is discussed. A concept of the scientific knowledge, as well as to safer and more efficient clinical application in the practice of medicine, is presented.

■ THE centennial of an event in a special field of scientific endeavor is an appropriate time to review the relationship from origin, through development and indicated trend, of the special

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, Michigan, September 24, 1942.

part—Anesthesiology, to the whole Medical Practice.

This year marks the centennial of the use of ether by the medical profession. In 1842, on March 30, Crawford Williamson Long, a physician of Jefferson, Georgia, administered ether to James Venable. During the sleep produced by inhaling this ether, Long enucleated one of two tumors from the nape of Venable's neck. Packard goes on to say, "The procedure was completely successful, Venable assuring Long that he experienced no pain whatever, and sometime afterwards Long operated again under ether on the other tumor."

Long is said to have thought animal magnetism (mesmerism) aided by ether inhalation was responsible for his earliest success. Evidence was produced that Long on many other occasions used ether to prevent pain in surgical procedures. Fülöp Miller credits Long by saying:

"Well, the experimenter had found the objective evidence of which he was in search, and could now be sure that ether and nothing but ether was the cause of the insensibility. He might have gone on to do more operations under ether, proud of his new method, which would have made of him the pioneer of an overwhelming important discovery, the introducer of anesthesia, of which even the name did not yet exist. He had made trustworthy observations, and had drawn the right conclusions from them. His original Supposition was shown to be correct. All that he lacked was the confidence of faith."

Chronologically,† pain relief was first obtained in an unexplained manner. Adam "slept" while a rib was removed and the flesh closed. This could have been by inhalation or by hypnotism according to various translations, as some say, "The Lord caused a wind to blow on Adam" while the currently accepted form is "And the Lord caused a deep sleep to fall on Adam."

Clay tablets found in Nippur dating about 2250 B.C. gave a remedy for tooth pain. One thousand years later Æsculapius used a potion, termed nepenthe, to produce insensibility in surgical patients. In 450 B.C., Hippocrates used the vapor of bangue by inhalation for narcosis and various mixtures and methods were tried in an unceasing search for an ideal anesthetic.

Credit for the earliest forms of anesthesia must be given in various fields of human endeavor, to physicians, dentists, priests, chemists, physicists, engineers, physiologists, pharmacologists, and to others whose observations, experiments or concepts entered and altered the development of this field in medical practice.

Lullius in Spain about 1240 had discovered "sweet vitriol." The chemists, scientists and physicians knew of the drug for three centuries before Paracelcus in Switzerland, experimenting on fowls, discovered and reported its soporific effect. He suggested its possible use in painful diseases. In 1541, Valerius Cordus, in Germany, recorded the synthesis of sweet vitriol named "ether" in 1792 by the German, Frobenius.

Could it be that the best educated group of scientists, the physicians, should fail to see the possibilities of Cordus' remarks about ether or of Davy's report that nitrous oxide might afford the long-sought pain relief? Three hundred years passed, filled with needless suffering because a well-intentioned but unobservant group—doctors—failed to make a trial or application of possible deductions from evident facts long known to chemists.

Medical practice is respected for its wisdom in making thorough trial over long periods before accepting new drugs or new principles. Surely etherization was a long time being accepted. After the first hundred years this new, improved tool in the physician's armamentarium developed from a humble beginning to a recognized major specialty.

The purpose of this presentation is not to revive an interesting argument on who was "first." It is to show the relationship of Anesthesiology to Medical Practice. The pre-centennial period was one of individual discovery by accident or experiment. Ether was made by a chemist, used in various ways by physicians, some of whom noted partial but interesting facts which in light of modern knowledge showed the way to anesthesia, but these sign posts were ignored.

From the very beginning of time, pain has haunted human beings. The presence of pain had hindered the progress of medicine. Remedial measures to restore an ailing body could not be undertaken because of pain. Death itself was welcome as a relief from pain and any measure regardless of danger was to be accepted if pain could be abolished, or obtunded.

The relationship of Long's, Well's, Morton's and Simpson's anesthesia for relieving surgical

†Lundy, J. S.: Clinical Anesthesia. pp. 705-717. Philadelphia: W. B. Saunders Company.

pain or obstetrical pain is to the present scope of anesthesiology as the acorn is to the oak. These physicians applied, experimentally, the drugs and methods suggested by chemist, apothecary, or by the engineer, as Watts, whose gas inhalers were used by Davy at Beddoes Pneumatic Institute. The era of trial and error was at hand. Just as an occasional figure stands out in every field of human endeavor, so does John Snow, a physician of London, who used methods of laboratory research as well as clinical observations on ether, published in 1847, and ether, chloroform and other anesthetics, published in 1858, which deservedly have given him the title "First Scientific Anesthetist."

Inhalation of ether for pain relief was quickly established. Pirigoff of Russia in 1847 reported on the rectal administration of ether. A new method was provided. In 1853, the hypodermic needle devised by Pravaz of France provided another mode for producing pain relief. It was named "anesthesia" in 1846 by Oliver Wendell Holmes, and allied with it was analgesia. Anesthesia is the loss of the sensation of feeling or touch. Consciousness is the differentiating factor between the terms, as analgesia is most frequently employed to refer to anesthesia without loss of consciousness.

Pain relief for surgery was extended to obstetrics. As this valuable adjunct made surgery safer and more comfortable it opened new fields within surgery. Dental pain relief was included. Rapidly the more time consuming, delicate, and intricate procedures were made possible through the application of anesthesia.

Anesthesia grew as additional drugs were found, and as methods of introducing them were devised. As part of the development of anesthesiology, the logical evolution was the responsibility of the administrator acquainted with gases, vapors, drugs, equipment, and with cardio-respiratory mechanisms involved in anesthesia to use his knowledge and skill to overcome apparent cessation of cardiac or respiratory function, and resuscitation immediately became a major factor in the list of functions of a qualified anesthesiologist. As inhalation anesthesia is a form of therapy so the field of pneumatology or gas-therapy is integrated.

The surgical specialties developed in the establishment of abdominal, gynecological, orthopedic, genito-urinary, plastic, neuro, brain, and chest surgery, and others, each using anesthesia as a means of advancing its own specialty through comfort for the patient and efficiency for the operator.

Surgical pain relief expanded to include treatment of intractable pain—to diagnose obscure diseases. From a simple inhalation technique progress was made to oral and nasal insufflation and later endotracheal and endobronchial intubation. Analgesia became possible as skill developed in the operation of adequate equipment. These phases of progress demanded additional knowledge of basic sciences.

One hundred years ago, the novice was capable of holding a handkerchief, towel or mask and giving ether, chloroform and later nitrous oxide gas. As the methods and drugs increased in number, the need for more than a technical "sixth sense" was evident. Additional drugs became the "what" as Flagg has recently written, and the method became the "how." When only ether by inhalation was available, what difference did it make what disease the patient had? With rectal and intravenous administration of anesthetizing drugs a greater need for more knowledge of pharmacology and physiology, of anatomy and pathology, was evident. True, a technician may still adequately give whatever anesthetic was ordered, but with the more complicated procedures made possible by good anesthesia, more of the operator's attention was essential to his own work. It is little wonder then, that the occasional student of anesthesia knew as much or more than the "supervisor." Modern hospital practice with separate dressing, scrubup, anesthesia, and operating rooms, makes "supervision" possible only by remote control.

Placing a needle in the spinal canal or for regional blocks when introduced, was considered part of the surgeon's duties. Now this work is included in the duties of the anesthesiologist.

Oxygen therapy developed to include many gases or vapors and became allied with surgical and obstetrical fields, and with the medical practice of the internist, allergist, and others. Hypnotism or mesmerism in the early part of the past century was used to provide anesthesia and is still being investigated. Shock treatments by carbon dioxide or nitrogen therapy for schizophrenia brought the anesthesiologist's service in close association with the psychiatrist.

Resuscitation, whether for overzealous intro-

duction of anesthetic drugs, for cardiac disease, pulmonary disturbance, or other causes, applies to all fields of medicine and surgery and in all age groups. In the course of treating shock, fluid therapy, including blood transfusion, has added another branch to the growing list of duties of an anesthesiologist.

From the foregoing remarks it should be evident that this field of medical endeavor has gone beyond the stage of technical aid to surgery. It is an extensive field for mastery by one individual, and it is still growing.

Medical practice may be described as the combination of a thorough knowledge of basic science in general, specific facts in detail, with an ability for rapid and logical deduction and an art in proper application of the conclusions derived "to diagnose, treat, operate on or prescribe for any human ailment."* All this is certainly required of the anesthesiologist of today. How can this be obtained? The early era of hit and miss trial and error is surely past. The era of mechanical obedience to routine, imitation of accepted practices, the mere relief of pain or production of tissue relaxation led to an era when surgeon and anesthetist realized that surgery had run away from its helpmate, anesthesia.

As the field has expanded it has outgrown the first era of single agent, single method technical task, to one which challenges the ingenuity and resourcefulness of its followers. This challenge has been accepted by increasing numbers of physicians completing their medical school and hospital internship, who seek a career in either clinical practice, teaching or research in this specialty.

Little incentive to diligent study was offered in the second "era" because "convenience" and "economy" too often decided the personnel of the anesthesia staff, as Rovenstine has remarked. Technical skill was an asset all important. Teaching was negligible. Much routine was established, empirically, because it had been suggested by a prominent person or on the weight of professional opinion. The range of the Anesthetist's domain was limited by the four walls of the operating room, or possibly extended to the limits of the operating room suite. During this era, the lack of glamour, but probably even more, the lack of genuine supervision, retarded progress in anesthesia. The clinical administrator of anesthesia became aware that he often knew as much, and occasionally more, than the operator charged with that responsibility.

Technical anesthesia is important. It can be taught to many who have not had physician's training. Surely this form of service can and should be available in any emergency from every physician. How can this be done? The medical school curricula is already full. The answer is simple. Demand by the physician for such training will work wonders. Postgraduate training will be promptly forthcoming. This in turn should awaken interest in the problem of this training in medical school. A sufficient genuine demand will cause medical schools to arrange programs whereby anesthesiology will be given specific time in the undergraduate program.

The "third era" began about 1920 with a realization by some outstanding physicians that anesthesia should render greater service in medical practice. More scientific methods of recording results were established. A few centers began to teach not only the "what" and "how" but went into the "when" and "why," or advanced special study of physiology, pharmacology, anatomy, diagnosis and other pertinent and basic principles. This was the era of self-styled specialists.

Large hospitals and clinics discovered that genuine saving in material, patient days, and improved physical results could be obtained by establishing training in the specialty. The American Medical Association coöperated and set up standards for approved residencies or internships. Some medical schools established a full department of anesthesia. The American Society of Anesthetists established certification by examination, in 1935.

By 1937 news of the widespread interest, and the extent of this special phase of medical practice, stirred a sympathetic note with the Advisory Board for Medical Specialists and the Council on Medical Education and Hospitals of the American Medical Association. They approved an American Board of Anesthesiology as an Affiliate of the American Board of Surgery. Within two years the affiliation, though most cordial and valuable, was dissolved by vote of all six surgical specialties and approval of the medical specialties. The restrictions to a single group were deemed most unfair and in 1940 Anesthesiology was recognized as a separate major specialty in

*Medical Practice Act, State of New York.

medical practice. That same year final plans were accepted and in 1941—99 years after Long, the American physician, used ether for anesthesia—a Section on Anesthesiology was established in the American Medical Association. Sections are granted only when there is undeniable proof of a definite need, plus a sufficient number of qualified physicians to warrant its establishment, as a specialty.

It is interesting to see why it is a major specialty. It most surely began as an adjunct to surgery through its alleviation of pain. After a few years it was adapted to and adopted by obstetrics. Medicine progressed. Surgery made rapid strides through the favorable assistance of anesthesia. Surgery began to specialize—orthopedic, gynecologic, nose and throat—all assisted by anesthesia, but the implications of anesthesia were not realized. Here the forest was obscured by the trees. Ether, chloroform, and nitrous oxide by open or semi-closed methods allowed surgical advances undreamed of and the proper attitude with regard to the "ology" of anesthesia was not appreciated. Anyone could "assist" the surgeon at the operating table. Then came situations where the surgeon could not supervise except by remote control. Besides, the lack of inclusion in most medical curricula left doubt that the supervisor had much more knowledge of anesthesia, if as much, as did the chemist, nurse, student, or layman. Since the boon to humanity was so great and at first so simple, why bother about qualifications? The surgeon had assumed responsibility so long for everything that the addition of anesthesia was just one more burden. Eventually it was realized that sharing responsibility made for safer and often better work in each department. No surgeon likes to be hampered by a neophyte operating room assistant. A good operating room nurse is of acknowledged importance. Recently the value of an anesthesiologist has become apparent.

The "fourth or present era" thus provides a definite time when every physician should have the benefit of specific training in this field. How else can he be held morally responsible for the supervision of a part of medical practice he has never learned? The present war has produced a situation unique in our history. Never has there been such a shortage of physicians or nurses. Because for the past eighty years anesthesia was not considered important in this country, nurses and technicians have been employed as anesthetists for convenience or presumed economic necessity until more than 3500 registered nurses, many sorely needed by the armed forces, are now not available in their regular nursing capacity.

Most recently with the present war demands of our armed forces, the anesthesiologist has been recognized. He provides valuable research with advice and clinical applications in meeting problems presented by high altitude flight and deep-sea diving. The anesthesiologist aids in making earlier return of greater numbers of soldiers with chest injuries than was possible for the technician. In other countries all physicians have been trained in medical school or internship in the technical principles of this work.

You, present today, should be able to step into your local clinic or hospital and render this medical service "under supervision." After a few contacts with this work you can justifiably demand—where did you (the supervisor) get your training? You will generally find that it was like Topsy—"just growed." So you can encourage him or her to back your request for a real establishment of this subject in the medical school.

Of sixty-seven Grade A medical schools in the United States, only forty-one list anesthesia as a regular subject and only twenty-six seem from reports to be carrying out actual class-room instruction in 1941. Curricula for training are being made available by the American Society of Anesthetists Committee on Education and the American Board of Anesthesiology's Committee on Curricula. Here, then, is a definite plea to you and to all physicians to urge that medical schools include this subject in their curricula, for medical societies and academies to establish refresher courses and thus make American physicians independent in anesthesiology.

Rovenstine has well said in urging the establishment of adequate teaching facilities and the organization of Departments of Anesthesia in hospitals, that such a department shall be "merited not for its individual service, but for its usefulness in making more efficient other institutional departments. Its object is to assist them in their efforts for better surgery, better and more economical care of patients, shorter hospitalization, better diagnosis, better treatment, and a lower death rate."

Haggard has wisely advocated a greater advertisement of anesthesiology to the layman as well as to the profession. There is evident an increasing awareness on the part of laymen everywhere of a trend for better medical service in their behalf. The public press, radio, and medical exhibits open to the lay person have intensified this interest and have led to an increased demand for the anesthesiologist. Persons today who must undergo painful procedures request not only "something to ease the pain," the "what" and "how," but more important, "someone who knows the when and why." Medical organizations and schools listen to and follow the reasonable request of public opinion.

A society of physicians interested in anesthesiology organized in 1905, expanded from a minimal membership of 140, with an average attendance of eight at the annual meeting in 1926, to an active society, national in scope since 1935, with 1,069 paid-up members, and with an average attendance of 143 at each of the six meetings held during 1941. Advertising the specialty is legitimately accomplished through meetings with other groups in various parts of the country—by supplying the physicians with scientific research and clinical presentations of interest to all, and by publishing a first-class medical journal—*Anesthesiology*—which is limited in content to the specialty but available to all interested readers.

In the past half-decade the specialty has obtained much prestige from recognition as a special field in medical practice by the establishment of the American Board of Anesthesiology and Section on Anesthesiology. The demand for properly certified specialists who have a truly scientific approach to problems involved has been met. With the close of the last era a great broadening of the field requiring greater basic training was evident. Anesthesiology is a broad subject. It covers pain relief in all its forms—analgesia and anesthesia, pneumotherapy with its ramifications, and resuscitation. Anesthesiology is a part of the practice of medicine and should be practiced by physicians.

Summary

The origin of anesthesiology has been traced. Contributing factors to the establishment of a special field in basic sciences as chemistry, physics, mechanics, anatomy, physiology, pathology and pharmacology have been acknowledged. Development of a specialty in medical practice has been traced through definite eras of discovery, of experiment and empiric practices, of prescientific, technical development and statistical records to the present era of scientific application through definite teaching standards. The growth of the specialty from an adjunct of surgery through direct connection with almost every special field of medical or surgical practice has been shown. Sources of demand for recognition of a medical specialty have been credited. An appeal has been made for every American physician to share in the further development of teaching, research and clinical practice of anesthesiology.

The centennial of the administration of ether by Long marks the beginning of an era in a newly accepted and intimately related field of medical practice, designated "Anesthesiology."

MSMS

Cases of Early Syphilis*

Suggested Outlines for Ambulatory Intensive Treatment

By Loren W. Shaffer, M.D.
Detroit, Michigan

LOREN W. SHAFFER, M.D.,

M.D., University of Michigan, 1917; U. S. Navy Medical Corps, 1917-1922; 1st Assistant Dermatology and Syphilology Mayo Clinic, 1922-1924; Asst. Prof. Univ. Penn., 1924-1925; Instructor, Wayne Univ., 1925-1937, Prof. of Dermatology and Syphilology, and Director Social Hygiene Dept. Detroit Department of Health 1937 to date. Member A.M.A. Amer. Acad. Derm. and Syph. Detroit Derm. Society, Amer. Derm. Assn.

■ WE have appreciated and even hoped that recent standards for the treatment of early syphilis might soon become obsolete. However, such standards have remained practically without change for the past fifteen years and could be simply stated as requiring continuous treatment, without rest periods, consisting of alternating courses of bismuth and arsenicals given at weekly intervals until a total of thirty to forty arsenicals and forty bismuth injections have been administered in a period of seventy to eighty weeks. Re-

*Prepared by the Chairman of the Syphilis Control Committee, Michigan State Medical Society.

cent developments are revolutionizing this concept of treatment. We are again in an unsettled state almost as indefinite as that following the introduction of salvarsan. We have a new means of attack but lack sufficient clinical experience and length of observation to standardize such methods. We, therefore, can no longer speak confidently about the most effective method for the treatment of early syphilis.

Intensive methods of treatment using rather heroic dosage of arsenoxide (mapharsen) given in a short period of time are now holding the limelight. Such intensive therapy is best exemplified in the five day drip method introduced by the Mt. Sinai Hospital (New York) group.[3] It consists of giving 240 mgs. of mapharsen in 2000-3000 c.c. of five per cent glucose, by slow intravenous drip, over an eight to twelve hour period daily for five days. A total dose of 1200 mgs. (twenty standard doses) of mapharsen is thus given in five days. Various modifications of intensive therapy using multiple injections by syringe technique are being tried. They also aim to administer a total dosage of 1200 mgs. by such methods, in variable periods of from six to twenty days. Multiple injections plus fever therapy are being used by Thomas,[5] and the most radical of all, a one-day method, has been reported by Simpson.[4] This method has been tried on only a small series of cases and was, unfortunately, recently reported in the lay press with unwarranted enthusiasm, by DeKruif.[1]

These intensive methods are producing results that, admitting the lack of sufficient length of observation, appear to be surprisingly satisfactory. The bugaboo in the management of early syphilis has been the inability to hold the great majority of such patients to a schedule of continuous treatment for seventy to eighty weeks. Intensive methods, even though they require hospitalization, will offer a great advance, at least from a public health standpoint, in the management of early syphilis.

A death rate, even under expert management, of approximately one in three hundred cases treated (0.3 per cent) usually from toxic encephalitis, emphasizes the potential hazard of such treatment. At the present time, therefore, such methods of treatment should be attempted only on hospitalized patients by well-trained physicians who have made at least an exhaustive study of the details of technique and management through available literature. Realizing that 80 per cent of early cases of syphilis in civil life fail to secure adequate treatment and are thereby rendered more liable to the serious manifestations of late syphilis, as well as a potential public health hazard, and the need in times of war of rendering infected personnel safe and available for active duty in both civilian and military life in the shortest period of time, makes this method of treatment justifiable with the above reservations in spite of an accepted mortality rate of 0.3 per cent. It has not been sufficiently emphasized in the lay press and even many physicians fail to appreciate that such therapy is recommended only for active cases of primary (chancre) and secondary syphilis that have not been previously treated. Selection of even these cases should be made on a basis of age and physical condition.

Modified Intensive Methods Suitable for Office and Clinic Practice

We have learned through experience with intensive therapy that more frequent injections and a higher total dosage of arsenoxide (not neoarsphenamine) can be given with reasonable safety in a shorter period of time. Our aim in the treatment of early syphilis has always been to cure the patient in the shortest period of time. On the basis of experimental therapy on 2500 rabbits, Eagle[2] concluded that the total curative dose of mapharsen is approximately constant whether administered in a few days or several weeks, and that the margin of safety between toxic and therapeutic dose is increased by prolonging the duration of treatment. Experience with intensive therapy would suggest that this curative dose is approximately 1200 mgs. of mapharsen. Eagle[2] has therefore suggested that an ambulatory intensive system be tried, giving three injections of mapharsen weekly for six to eight weeks in dosage of 40 to 80 mgs. per injection, depending on weight. Some cases will also receive supplementary bismuth therapy. A number of clinics are coöperating in carrying out this treatment regime. The results thus secured through a large number of cases should soon determine the efficiency of this method of treatment.

The Surgeon-General of the United States Army recently issued Circular Letter Number 74 which will probably become famous. It outlines a modified form of intensive treatment for cases of early (primary and secondary) and asympto-

matic or truly latent syphilis. To ascertain latency, all cases should have a complete physical and spinal fluid examination before treatment is begun, to determine eligibility by ruling out tertiary (particularly cardiovascular) and neurosyphilis. Cases of early syphilis should have a negative spinal fluid examination after the first mapharsen course or at least on completion of the treatment, before they are to be dismissed to observation only. This Army Plan, as outlined herein, has had as yet practically no clinical evaluation, and its effectiveness is still to be determined.

ARMY PLAN

(For Early and Latent Cases)

Mapharsen

Week	1)	
	2)	
	3)	Mapharsen
	4)	intravenously
	5)	.05 to .07 gm.
	6)	adjusted to
	7)	weight twice
	8)	weekly for ten weeks.
	9)	Total twenty injections
	10)	
	11)	
	12)	
	13)	Omit
	14)	Mapharsen
	15)	six weeks
	16)	
	17)	
	18)	
	19)	
	20)	Mapharsen
	21)	as in
	22)	first course
	23)	twice weekly
	24)	Total twenty injections
	25)	
	26)	

Bismuth

Week	1)	Bismuth Subsalicylate
	2)	0.2 gm. intramuscularly
	3)	once weekly, five doses
	4)	
	5)	
	11)	
	12)	Bismuth
	13)	as above
	14)	once weekly
	15)	six doses
	16)	
	22)	Bismuth
	23)	as above
	24)	once weekly for
	25)	five doses
	26)	

This plan calls for a total of 40 mapharsen and 16 bismuth injections in a period of 26 weeks. On the completion of treatment, early cases should be rechecked preferably at monthly intervals for the first year. Latent cases may be checked at three-month intervals during the first year. Thereafter, if serologically negative, both types should be rechecked at six-month intervals for a total of at least five years. The serology in positive cases, as also applies to the more intensive methods of treatment, usually does not reverse to negative until two to ten months after treatment has been completed. A quantitative test is desirable since it gives more information in following such treated cases. Early cases should have a complete physical with each follow-up examination or banal secondary recurrences may be overlooked. Consultation should be requested for cases that remain sero-positive for one year after treatment is completed and for early cases discovered to have a positive spinal fluid, that do not show satisfactory improvement on recheck of spinal fluid at the end of six months.

This Army Plan is frankly a compromise between the short intensive system now being tried out and the seventy-week standard treatment regime. It should not be used for late cases or in elderly patients or those that are poor risks from a physical standpoint. It should be safe, reasonably effective and shorten treatment time from seventy to twenty-six weeks. Experience would indicate, however, that it will still be difficult to hold a satisfactory percentage of clinic type patients to even a 26-week course without lapses.

In January, 1942, an ambulatory intensive method of treatment was begun at the Social Hygiene Clinic of the Detroit Department of Health. It has been used only for cases of primary or secondary syphilis that have either refused hospitalization for five-day therapy, or have been considered poor risks. It is somewhat more intensive than the Army Plan. It calls for thirty mapharsen and eight bismuth treatments over a period of fifteen and two-thirds weeks or approximately four months. It was hoped to hold patients more effectively to this schedule than with standard treatment. It has been satisfactorily tolerated to date but it is still too early to attempt an appraisal of our results. It is

offered as another modification of an ambulatory intensive method for office and clinic use.

DETROIT PLAN
(Early Cases Only)

1. Mapharsen (.05 to .07 gm. according to body weight) three times weekly for 20 doses (6⅔ weeks).
2. Bismuth subsalicylate 0.2 gm. twice weekly for eight doses (four weeks).
3. Mapharsen twice weekly for ten doses (five weeks). A spinal fluid examination should be made during the bismuth course or at least on the completion of treatment. Otherwise, follow-up is same as outlined in the Army Plan.

Our experience with this plan has been disappointing in that we still have a discouragingly high percentage of clinic patients who fail to complete this course of treatment according to schedule. It will therefore be necessary to shorten still further ambulatory intensive methods if they are to be effectively carried out. This makes the five-day hospital plan the most satisfactory. As stated, the limitations of five-day therapy would not permit its recommendation for general use. Further experience with six- to ten-week courses after the Eagle plan is indicated.

The Detroit ambulatory system as outlined has therefore been modified in an attempt to shorten still further the period of treatment. We are giving three mapharsen injections weekly for eight weeks along with eight weekly injections of bismuth salicylate. This totals twenty-four mapharsen and eight bismuth injections administered in eight weeks. Experience in Eagle's group would indicate that such intensification is not without hazard since they report one death in approximately 1,000 patients similarly treated. We do not believe, therefore, that such six- to eight-week courses should be recommended for general use at the present time. Until further experiences are accumulated proving both their safety and efficiency, we believe that either the Army or the Detroit Plan of modified intensive therapy may be recommended for general use in cases of early syphilis where physicians feel that patients will not prove coöperative in completing without lapses the standard 70-week course now in general use.

Conclusions

1. Intensive treatment of the five-day type is potentially hazardous. Its use should be limited to such cases as can be treated in special hospitals with adequately trained and experienced personnel.

2. Intensive treatment has been used primarily for cases of early syphilis (chancre or secondary) that have had no previous treatment. It is not recommended for late syphilis or serologically-fast cases.

3. Modified intensive methods for ambulatory patients suitable for office or clinic use are being tried out. There has not been sufficient experience as yet with such methods to recommend any one plan as standard treatment. The suggested plans of Eagle, the U. S. Army and the Detroit Department of Health are outlined.

4. The proven efficiency and safety of continuous treatment (seventy to eighty weeks) makes this method the procedure of choice for general use until the efficiency and safety of ambulatory intensive methods have been satisfactorily established. The use of such ambulatory intensive methods should be limited at the present time to such cases as the physician believes will not prove coöperative in completing without lapses standard continuous treatment.

Bibliography

1. DeKruif, Paul: Found: A one-day cure for syphilis. Readers Digest, 41:10, (Sept.) 1942.
2. Eagle, H., and Hogan, R. B.: The intravenous drip and other intensive methods for the treatment of early syphilis. Science, 95:360-362, (April 3) 1942.
3. Hyman, H. T., Chargin, L., Rice, J. L., and Leifer, W.: Massive dose chemotherapy of early syphilis by intravenous drip method. Jour. A.M.A., 13:1208, (Sept. 23) 1939.
4. Simpson, W. M., Kendall, H. W., and Rose, D. L.: The treatment of syphilis with artificial fever combined with chemotherapy. Supplement No. 16, Venereal Disease Information, Superintendent of Documents, Washington, D. C.
5. Thomas, E. W., and Wexler, G.: Rapid treatment of early syphilis with multiple injections of mapharsen. Am. Jour. Pub. Health, 31:545-556, (June) 1941.

MSMS

A revolutionary change has taken place in the treatment of ophthalmia neonatorum with the advent of sulfonamide therapy. Previous to 1938 a gonorrheal ophthalmia meant many weeks of treatment. Frequent irrigations, ice compresses, atropine, silver nitrate and argyrol instillations, foreign protein canthotomies, etc., were part of the treatment. Many eyes were lost and others severely damaged. Early in 1938 Willis reported the use of sulfanilamide by mouth in the treatment of gonorrheal ophthalmia. Now with a like but less toxic drug, sulfathiazole, Neisserian conjunctivitis gets well virtually before our eyes. Negative conjunctival scrapings are nearly always obtained within seven days after the advent of the disease.—W. Howard Morrison, M.D., Omaha, in the *Nebraska State Medical Journal.*

Some Surgical Problems in Ulcer Treatment*

By C. Fremont Vale, M.D.
Detroit, Michigan

C. Fremont Vale, M.D.

M.D., University of Pennsylvania, 1916. Founder Member American Board of Surgery and Central Surgical Association. Clinical Professor of Surgery, Wayne University School of Medicine.

Operation advised for ulcer only when reasonably certain that conservatism will not protect from bleeding, obstruction, or constantly recurring pain. Decision, though sometimes easy, usually made after study of all factors. Thorough preparation essential. Saving hospital days is dangerous. Dilated stomachs need decompression by prolonged constant suction, not intermittent emptying. High resection gives best results. Pyloroplasty has been discarded, gastroenterostomy reserved for aged and feeble with obstruction. Antecolic anastomosis the preferable method of reconstruction. Even though no open ulcer demonstrable resection should be done. Deliberate opening of duodenum often necessary to safely dissect sufficient cuff for secure inversion. Duodenal stump fistula highly fatal. Resection for exclusion, with removal of prepyloric mucosa, should be kept in mind. Experience will reduce need for its use. No sulfa drugs used intraperitoneally. Continuous spinal best anesthetic, if available. Immediate postoperative coöperation of patient in deep breathing and coughing prevent severe atelectasis, the most common complication. Minimal sedation. Bronchoscopic aspiration early or not at all. Constant nasal tube suction prevents nausea, vomiting and distention, permits clear fluids at once. Mortality rate greatly reduced.

■ The greatest single advance by surgeons in the treatment of ulcer occurred when they stopped operating on uncomplicated cases. As a result, surgery for ulcer today carries a heavier burden in that it must now attempt to cure only those patients which medical measures have not relieved, and all of these are difficult cases. Rapid advance has occurred in the last few years in the type of operation, the technique of its performance, and in pre-operative and postoperative care. There are still many points where disagreement persists, and problems yet awaiting complete solution. We propose to discuss a few of these, thinking primarily of duodenal ulcer.

Selection of Patients for Operation

What ulcer patients should be accepted for operation? Immediately we are faced with one of the hardest questions. It can and has been answered quite simply by saying those should receive the benefit of surgery which bleed repeatedly, those which obstruct, those which have proven intractible to good medical care and those in which malignancy is feared. However, the one which has bled repeatedly may be relatively young, and may not have received or followed a good regime. We must be reasonably satisfied that he cannot or will not be protected from recurrence by conservative measures. A definite knowledge of the degree of bleeding is important. A mouthful of blood will mean a hemorrhage to one patient, while a fainting attack followed by copious tarry stools will be just a little bleeding to another. It is recognized that as age increases so also does the danger that bleeding will prove fatal. One places the line at forty-five years after which age all cases should be operated upon. Another says it should be fifty years. But one person at fifty may have better arteries than his neighbor at forty.

The patient who is obstructed may show a hugely dilated stomach with no barium passing through the pylorus in twenty-four hours and seems to demand surgery. Yet this may be due entirely to edema. A few days of constant suction by means of a tube passed through the nose into the stomach will restore the latter to normal size and may allow the pylorus to regain its function. A satisfactory study of the pylorus and duodenum can then be made, and often followed by complete relief under good medical management. Constant suction is vastly superior to frequent lavage, both as to time and certainty of result.

Then there is the intractible case, most difficult of all to evaluate. Certainly operation should not be advised until medical treatment has failed. When shall we say it has failed? How satisfied can one be from the patient's history that treatment has been adequate? The surgeon must be convinced beyond reasonable doubt that only operation offers permanent relief. Therefore, the decision as to whether to operate or advise further medical treatment cannot be answered by putting the patient into his proper slot of hemorrhage, obstruction, or intractability. While the conclusion is easily reached in many cases, in most it is only after careful consideration of all the information obtainable that one may be satisfied with his judgment. The primary reason for operation in ninety-six cases is shown in Table I.

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, Michigan, September 25, 1942.

TABLE I. REASON FOR OPERATION IN NINETY-SIX RESECTIONS

Bleeding 18			Obstruction 23			Pain 46			Fear Ca. 9
Obst. 1	Perf. 4	Pain 8	Bldg. 10	Perf. 3	Pain 13	Bldg. 13	Perf. 11	Obst. 17	
13			26			41			

Bleeding present	41
Obstruction present	41
Pain present	67
Previous perforation	18

It also indicates the large proportion of serious secondary complaints. In Table II the incidence of these primary symptoms is shown by age groups.

When to Operate

When shall operation be performed? There is often the temptation to accede to the patient's insistence that it be done promptly as soon as he has agreed. If one is to keep a low mortality rate, the best preparation of the patient should be attained, and this often takes time. The man who has just suffered a severe hemorrhage, even though he has stopped bleeding and his blood picture is approaching normal, should be sent home for from two to four weeks. During this time he should be reasonably active, and taking a diet rich in proteins. His resistance to infection and his healing power will be much greater.

The patient with pyloric obstruction has a large dilated stomach with edematous walls. He should have several days of constant suction to reduce the dilatation and edema. This was used to prepare twenty-five patients in this series. An edematous wall is hard to work with because it is thick and the stitches pull out easily, increasing the danger of leakage or bleeding. The dilated stomach may cause the surgeon to make an anastomosis normally sufficient, but when the remaining stomach contracts it may be too small. We like to have these patients out of bed for several minutes twice a day during this preparatory period to prevent too much loss of general tone.

Determination of serum proteins and blood urea are routinely done. If the former level is below six, time is taken to raise it, either by food or small repeated plasma transfusions, or both. High blood urea can usually be lowered quickly by intravenous glucose in saline.

TABLE II. REASON FOR OPERATION BY AGE GROUPS

Age	Bleeding	Obst.	Pain	Fear Ca.	Total	
25–30	4	1	8	1	14	
31–35	2	3	2	1	8	(56)
36–40	3	4	11	0	18	
41–45	3	4	8	1	16	
46–50	1	4	7	0	12	
51–55	4	4	4	2	14	(40)
56–60	1	1	2	2	6	
61–65	0	2	4	2	8	
	18	23	46	9	96	

In general we may say that time spent in good preparation pays rich dividends in smooth convalescence, and a lowered mortality.

Choice of Operation

What type of operation shall be done? Most ulcer patients now coming to the surgeon have been so miserable for so long that they really mean it when they say they want to be well or dead. Experience has shown that gastro-enterostomy is by no means a curative operation in too many cases. In addition to those who continue to have distress unless they live very carefully, or in spite of it, there is that too large number who develop jejunal ulcer. The pain associated with this is usually more severe, more persistent, and less amenable to relief by conservative measures. In nine gastro-enterostomies for duodenal ulcer done during the last four years, in carefully selected cases, two have developed jejunal ulcers, another has bled, probably from his duodenum, and still another, while improved, is not well. We believe this operation should be reserved for the aged and feeble patient with obstruction.

Pylorplasty cannot be satisfactorily performed on the scarred and deformed tissue present, the diseased or ulcerated area is not removed, and the results have been so disappointing that it has almost been discarded.

It has taken us rather a long time to accept high resection of the stomach as the operation of choice in duodenal ulcer. However, most surgeons who have had much experience with this problem have adopted the major procedure together with its risk because of the excellent results. It eliminates hyperacidity, hypersecre-

tion, hypermotility and pylorospasm, which are so constantly present in the ulcer patient.

It was assumed that the mortality rate would continue to be a deterring factor, and therefore limit the indications for resection. With greater experience and familiarity with this operation the mortality rate now compares favorably with that following the lesser operations. When the complications of the latter which require the most major procedure for correction are considered, resection proves safest in the end.

Ulcer Not Found

When an open ulcer cannot be demonstrated at operation what should be done? This occasionally occurs in cases properly selected for surgery. We have been accustomed to think of these patients as having one ulcer all the time, always present, but not always active, or causing symptoms. This we now know to be untrue in many cases at least. The ulcer often does heal, but there is so much scar tissue in the duodenal wall that a new ulcer easily forms. With each repetition the deformity increases. Clinical proof that ulcers occur at different points in the duodenum at different times is found in those patients who have perforated an anterior ulcer at one time and bled from a posterior one at another. There are at least nine such cases in this series. Though no actual ulcer is found, the scars of previous trouble are the guarantee that the future holds more. Resection should proceed as planned and not be traded for a simple appendectomy.

Duodenal Stump

The problem of the duodenal stump. Leakage here is a very serious, usually fatal complication, and can only be prevented by getting a good cuff for inversion. The duodenum is always adherent to the pancreas, often the ulcer has perforated into it, making it difficult to dissect off enough to get a good closure. Deliberate opening of the duodenum near the pylorus and placing the finger inside as a guide has helped greatly in many cases. It has not been followed by infection. As a further protection the stump is turned into the head of the pancreas with a few silk sutures.

The Buried Duodenum

In some cases the duodenum is so thoroughly imbedded in dense fibrous tissue which makes one mass with the head of the pancreas that successfully dissecting it free seems impossible. Here Finsterer's resection for exclusion is a good operation to have at hand. The stomach is divided about two inches proximal to the pylorus and the distal stump inverted after the mucosa of this area has been removed. The resection is then carried out as usual. This excludes the diseased area from the food stream, and is preferable to the risk of cutting the common or pancreatic ducts, or the chance of duodenal stump leakage. It has given good results in our hands in seven patients. However, the greater the number of cases one does the more infrequently does one resort to this procedure.

Type of Anastomosis

What type of anastomosis should be used? It has appeared to us that uniting the stump of the stomach to the duodenum, as in Billroth's first method, has no place in the operation for duodenal ulcer. If a sufficiently high resection is done the stomach and duodenum can be brought together only after extensive mobilization, or held under tension which is to invite disaster. Nor should we place too much confidence in the diseased duodenal wall to hold or to heal.

We prefer the anterior anastomosis, bringing a long loop of jejunum in front of the transverse colon. This loop should not be so short as to cause tension or to carry the weight of the colon. Enterostomy between the afferent and efferent limbs is not only unnecessary, but tends to defeat one of the purposes of the operation, namely the alkalinization of the stomach and anastomotic area. This method has been used in sixty cases with complete satisfaction. A short jejunal mesentery occasionally makes the anterior union impractical, when the posterior route through the transverse mesocolon is used. Here it is of great importance that the mesocolon be securely anchored to the stomach above the stoma to prevent constriction of the jejunal loop.

Possibly at a time when the sulfa drugs are riding the crest of a popular wave we should not admit that none are sprinkled around the anastomosis or duodenal stump. No peritonitis has developed except early in our series when one suture line broke down and two duodenal stumps blew out. Chemotherapy is not a substitute for poor surgery, and would not have saved these cases.

TABLE III. ANESTHESIA AND PULMONARY COMPLICATIONS

		Atelectasis	Pneumonia	Rec.	Died
N_2O Ether	62	7	2	6	3
Pentothal and ether	3				
Intratracheal	10	7	1	5	3
Spinal	21				
Novocain—2					
Pontocain and local—1					
Nupercain—7		2	1	3	
Fractional—11		4	1	5	
	96	20	5	19	6

Anesthesia

Another problem is the choice of the anesthetic. Ether, after induction with one of the gases or pentothal sodium, is fairly satisfactory. We thought for awhile that when given through an intracheal tube it would be hard to improve upon. But such a high rate of major pulmonary complications followed that we discontinued it. Local and splanchnic has been used (only in carcinoma of the stomach) but this is tedious both for the surgeon and the patient. Dilute nupercaine intraspinally proves ideal in some cases. But if difficulties prolong the operation unduly its action may not last. Intermittent spinal, often called continuous or fractional spinal, with novocain, is our first choice at present. It can be well controlled, given in small amounts as needed, provides excellent relaxation, and seems to have a very high safety factor. The practical objection is that anesthetists competent to give it are not widely available. Table III presents a summary of anesthesia and pulmonary complications. While the occurrence rate is less when ether is used, the complications are more serious. The long period between the close of operation and the return of full consciousness together with an active cough reflex to a large extent explains this. Atelectases following any form of spinal have been less extensive and more quickly controlled. We believe it is due to elimination of this period of unconsciousness.

Postoperative Problems

Treatment at this time is almost as important as the operation itself. Vomiting and distention have been almost completely eliminated by the use of constant suction. Clear fluids are given as soon as the patient desires them. This washes out any blood clots and keeps the stomach clean as well as free from swallowed air and intestinal regurgitation. It prevents pressure on the diaphragm and the consequent embarrassment of free aeration of the lungs. When the record shows a positive balance, that is, more being taken by mouth than returned through the tube, it is removed. If there is doubt about this balance, the tube may be clamped, being opened only if the patient is distressed. A clean, moist tongue and audible normal peristalsis usually mean the tube is no longer necessary. It is rarely needed more than four days or less than two.

Occasionally, just when the patient is beginning to take a maintenance diet, vomiting occurs. In a surprisingly short time not even water is retained. The temptation to re-operate at this point should be vigorously resisted. An edema of the tissues about the anastomosis has probably occurred. A low serum protein will support this diagnosis. Small, repeated plasma or whole blood transfusions will improve this level. Nasal tube suction will again maintain comfort. If this obstruction persists for over two weeks a mechanical cause must be suspected and exploration may be decided upon. In one such case we found omentum wrapped around the stoma and both jejunal loops. Jejunostomy for feeding may well be done at this time. It is definitely indicated if only stomal edema is found.

Our most frequent and disturbing complication has been pulmonary atelectasis. This is nearly always evident within the first forty-eight hours. It has occurred after all types of anesthesia. The cause remains obscure, but insufficient regular aeration of the lungs must be an important factor. We have tried to eliminate some possible elements. Since these resections should be high the work close to the diaphragm is done as gently and with as little tension as possible to prevent diaphragmatic irritation. A carefully made paramedian incision is used, either right or left, retracting the rectus muscle outward. This is as carefully closed, using interrupted silk sutures. It seems to be the least uncomfortable incision, next to the transverse which we have not found satisfactory in most ulcer patients who have high, narrow costal arches. Transverse bands of adhesive for dressing have been eliminated. A

narrow strip of gauze is placed over the incision and held by two vertical strips of adhesive. Morphine is given as sparingly as possible, in doses of never more than 1/6 grain to preserve the cough reflex. We have also eliminated the use of atropine, believing that it favors plugging of the smaller bronchi by its tendency to produce thicker and more tenacious mucus. Nurses and house officers are instructed to support the incision and compel the patient to cough at frequent intervals during this danger period. He is also encouraged to move about in bed a great deal, turning from side to side with as little assistance as possible. As suggested above, the use of a spinal anesthetic makes early coöperation possible.

The treatment of this condition follows the same line as the attempt to prevent it. Patients can be made to cough up the offending plugs in nearly all cases. X-ray films of the chest are important because they so clearly show whether or not treatment is being effective. If the affected lung does not clear promptly, bronchoscopy should be done early. It is only harmful if done too late.

The material upon which these comments are based includes resections for sixty-two duodenal ulcers, twenty-two gastric, six jejunal, and six cases in which both duodenal and gastric ulcers were present. There were six deaths in the first twenty-seven, and three in the following sixty-nine. Partial solution of the problems mentioned has favored the reduction in mortality.

MSMS

PASTEURIZATION OF ALL DAIRY PRODUCTS ESSENTIAL IN CONTROL OF BRUCELLOSIS

Careful pasteurization of all dairy products is an essential safeguard against milk borne brucellosis (Malta or undulant fever), it is pointed out in *The Journal of the American Medical Association* for January 30 in a report on a milk borne epidemic of the disease in Marcus, Iowa. The report is presented by I. H. Borts, M.D., Iowa City; D. M. Harris, M.D., Le Mars, M. F. Joynt, M.D., Marcus; J. R. Jennings, B.A., and Carl F. Jordan, M.D., Des Moines.

From their findings the investigators also advise that hogs should not be permitted to run on the same lot with dairy cows and that prevention of the occurrence of brucellosis in human beings requires a continuing program and effective measure for the eradication of the disease among farm animals. The epidemic at Marcus, involving seventy-seven persons, was caused by a strain of the organism causing brucellosis which was traced to a raw milk supply. It was found that hogs had been allowed to mingle freely in the same pasture with the dairy cows.

Nephritis and Nephrosis*

By E. T. Bell, M.D.
Minneapolis, Minnesota

E. T. Bell, M.D.

Professor and Head of the Department of Pathology, University of Minnesota. He has interested himself over a long period of time in the pathology of diseases of the kidney, particularly glomerulonephritis and hypertension kidney. He has also written a number of papers in other fields of pathology and has been interested for many years in surgical pathology. He is co-author and editor of Bell's "Textbook of Pathology."

Nephritis is best classified on an anatomical basis as glomerular, tubular, interstitial and vascular. Glomerular diseases are of two types, viz., obstruction of the glomerular capillaries (proliferative), and hyperpermeability of the capillary wall (membranous glomerulonephritis). This latter type is called lipoid nephrosis. Proliferation of the capillary endothelium obstructs the blood flow through the glomeruli decreases the glomerular filtrate and causes uremia. In lipoid nephrosis the blood proteins leak into the urine, decreasing the plasma proteins and causing edema. Albuminuria and edema are evidences of glomerular not tubular disease. The conception of a nephritic or nephrotic "Einschlag" is incorrect.

■ Apart from congenital anomalies and hydronephrosis renal diseases may be classified on an anatomical basis as glomerulonephritis, tubular disease, vascular disease and interstitial nephritis. This anatomical classification corresponds entirely with clinical syndromes and makes it possible for the clinician and the pathologist to use the same terminology. This discussion will be restricted to the diseases of the glomeruli and the tubules.

Glomerular Diseases

Glomerular diseases are of two distinct types: (a) Proliferative glomerulonephritis in which the glomerular capillaries are obstructed by enlargement and proliferation of the lining endothelial cells, and (b) a disease of the capillary basement membranes which causes them to become permeable to the plasma proteins. This second type of glomerular disease is commonly called lipoid nephrosis.

Proliferative Glomerulonephritis

This form of glomerular disease is much more frequent than lipoid nephrosis except in children under ten years of age in which group nephrosis

*Presented at the Seventy-seventh Annual Meeting of the Michigan State Medical Society in Grand Rapids, September 24, 1942.

is the dominant type. It is also called azotemic glomerulonephritis because of the characteristic retention of nitrogen in the blood. With respect to duration we may distinguish acute, subacute and chronic forms although the groups are not sharply separable.

1. *Acute glomerulonephritis.*—This disease is nearly always preceded by or associated with an infectious process, usually a streptococcal infection. Among the common antecedent infections are sore throat or other acute upper respiratory infections, cellulitis and scarlet fever. Albuminuria is a constant feature, but there is no direct relation between the amount of albumin and the ultimate outcome. Recovery is not complete as long as there is any protein in the urine. The urinary protein is plasma protein which passes through the walls of the injured glomerular capillaries. There is nearly always an increased number of red cells in the urinary sediment and occasionally there is gross hematuria. Edema is commonly present but is seldom a serious complication; frequently there is no edema. The specific gravity of the urine is not markedly reduced except in severe cases which have developed uremia. The blood pressure is usually moderately elevated, the systolic pressure being increased 20 to 40 mm. Hg. In mild cases no hypertension may be observed.

In fatal cases the kidneys are markedly swollen and cloudy. On microscopic examination the tubules show no conspicuous changes, but the glomeruli are enlarged, avascular and cellular. Under high magnification it is found that the glomerular capillaries are almost completely obstructed by growth of the lining endothelial cells. The capillary obstruction causes a great reduction in capillary blood flow and a corresponding reduction in the amount of glomerular filtrate. Uremia develops because of obstruction of the glomerular filter.

In the cases that recover completely or become chronic the degree and extent of the capillary obstruction is presumably much less than in those who die of uremia in the acute stage.

About one-half of persons with acute glomerulonephritis recover completely, a small percentage die of uremia in the acute stage and a large percentage pass over into the subacute, latent chronic or active chronic stages.

2. *Subacute glomerulonephritis* is applied arbitrarily to cases that terminate in uremia from three months to one year after onset of the acute attack. There is albuminuria, edema, severe hypertension, and renal insufficiency. The kidneys are enlarged and pale. Microscopically there is severe obstruction of most of the glomerular capillaries by endothelial cells. The tubules show marked atrophy from disuse and ischemia. There is no primary injury of the tubules. Although the tubules are atrophic the kidneys are still large because there has been insufficient time for contraction to occur.

About one-fourth of patients with acute glomerulonephritis pass over into a latent chronic stage and remain apparently well for many months or years, but a careful study during this period will usually reveal some abnormality. After months or years of quiescence symptoms of the active chronic stage develop. The kidneys of the latent stage are available for study only in rare instances of death from intercurrent disease, since the renal lesion is very mild.

The kidneys of the latent stage appear normal macroscopically, but careful microscopic study reveals central hyaline masses in the glomerular lobules with a little narrowing of the glomerular capillaries. The progress from the latent to the active chronic stage is presumably due to repeated streptococcic infections with progressive obstruction of the capillary circulation.

3. *Chronic glomerulonephritis.*—In autopsy material this form of the disease is about four times as frequent as the acute type. The patient usually consults his physician in an advanced stage of the disease, with hypertension, anemia, and renal insufficiency. Albuminuria and edema are seldom prominent. A majority of the patients do not recall an acute attack; but since the histological structure shows conclusively that there was an acute attack, we must believe that the initial symptoms are usually very mild. In thirty cases in which a definite history of an acute attack was obtained the duration of life from onset until death varied from one to twenty-five years, averaging ten years.

At autopsy the kidneys are commonly small and contracted but may be of normal size. There is no constant relation between the duration of the disease and the size of the kidneys. Microscopically a large majority of the glomeruli are

hyaline and their associated tubules have almost completely disappeared. The intertubular connective tissue is relatively increased because of the contraction of the kidney; and this feature is responsible for the old conception of chronic interstitial nephritis.

In all forms of proliferative glomerulonephritis the basic lesion is obstruction of the glomerular capillaries. The tubular atrophy is secondary to the destruction of the glomeruli.

Lipoid Nephrosis

This is also a glomerular disease but the basic disturbance is injury of the capillary wall, i.e., the capillary basement membrane, of such a nature that the blood proteins pass through it into the urine. The term "nephrosis" was first used to designate non-inflammatory diseases of the kidneys; but in this sense it includes a large variety of unrelated diseases such as the bichloride kidney, the amyloid kidney, the kidneys of multiple myeloma, cloudy swelling and lipoid nephrosis. Some writers have used nephrosis in the sense of tubular disease; but some non-inflammatory renal diseases are glomerular, e.g., amyloid disease, and lipoid nephrosis is a glomerular disease. In recent years a majority of writers have restricted the term "nephrosis" to lipoid nephrosis. Many investigators consider it a tubular disease, and others regard it as a metabolic disorder with a secondary effect upon the kidneys.

The onset of symptoms sometimes follows an upper respiratory infection, but frequently there is no antecedent infection and the first prominent symptom is edema. The characteristic symptoms and signs are severe albuminuria with marked edema, hypercholesterolemia, and a decrease of the plasma proteins. One may distinguish a type or stage of the disease in which there is no hypertension or renal insufficiency (pure lipoid nephrosis), and a type in which one or both of these features are present (mixed type of lipoid nephrosis). The great majority of the cases of the pure type persist as such, but a few develop hypertension and uremia after some months or years. The great majority of the cases in children under ten years of age are of the pure type, but in adults the reverse relation obtains.

A majority of the cases of the pure type and all of the mixed type terminate fatally. In the pure type death is due to a complicating infection, usually peritonitis; in the mixed type death is due to uremia or to exhaustion and inanition.

In the pure type the kidneys are enlarged and usually of yellowish color. The proximal convoluted tubules usually contain lipoid droplets, but there is no evidence of a serious functional disturbance. The glomeruli in most instances show no visible alterations, but sometimes a few and occasionally all the glomeruli show definite thickenings of the capillary basement membranes.

In the mixed type there is invariably a marked thickening of the capillary basement membranes with narrowing of the capillary lumens. In those with uremia the capillaries are greatly narrowed by their thick walls and there is a marked disuse atrophy of the tubules. Many glomeruli become hyaline.

The primary disturbance in lipoid nephrosis is injury of the capillary walls causing them to become permeable to the blood proteins. The great loss of protein in the urine depletes the plasma proteins, lowering the colloid osmotic pressure and causing edema. Decrease of plasma proteins lowers the resistance to infection.

When a patient with pure lipoid nephrosis assumes the features of the mixed type no new disease has been introduced. There is merely a progressive thickening of the basement membranes with obstruction of the glomerular capillaries which produces renal insufficiency and hypertension. There is no such thing as a nephritic or nephrotic "Einschlag."

Albuminuria and edema are evidences of glomerular not tubular disease.

Tubular disease is rare in clinical experience and the characteristic symptoms are usually oliguria, anuria and uremia. Two anatomical forms of tubular disease are known, the degenerative and the obstructive. The degenerative form is illustrated by the mercuric chloride kidney. No urine is excreted because all the glomerular filtrate diffuses back through the damaged tubules.

The tubules may be obstructed by casts as in the transfusion kidney, or by masses of crystals as in uremia from excessive administration of sulfonamides.

MSMS

In the swiftly changing world of today many roads are open but the one marked status quo is closed. If the medical profession does not choose where it will go, less competent powers will choose for it.—*Journal Kansas Medical Society,* March, 1943.

Choice of Operation in Cases Requiring Hysterectomy*

By W. C. Danforth, M.D.
Evanston, Illinois

M.D., Northwestern University Medical School, 1903; intern at Cook County hospital, 1903-04, postgraduate study at University of Vienna, 1905-06. On the faculty of Northwestern University Medical School for many years as Associate Professor of Gynecology and Obstetrics until 1937; Professor since that date. Has contributed to two textbooks, written one pouular book and about sixty papers on various gynecological and obstetrical topics. Fellow, Institute of Medicine of Chicago and member of American Gynecological Society.

Hysterectomy is a frequently performed operation. The employment of a fixed technique in all cases is inadvisable. The choice of operation should be made to fit individual conditions. Subtotal abdominal, total abdominal, and vaginal hysterectomy all have their place. Practice in active clinics tends to the more frequent removal of the entire uterus. Study of 1500 cases of various types is presented.

■ For some years the question of the method to be employed in removing the uterus has interested men whose work lies in the field of gynecology and obstetrics. For many years, after the possibility of removing the uterus surgically had been demonstrated, the body of the organ was amputated above the level of the vagina. The stages through which the operation passed in its development constitute an interesting chapter in the history of modern gynecology. Of late years many pelvic surgeons have felt that the incomplete removal of the uterus is an operation which, in many cases, is not wholly satisfactory and have made use of the more extended procedure which includes the cervix. Vaginal hysterectomy has come into a wider employment than it formerly had and has been found, in those clinics in which it is used, to be a very useful method of excising the uterus in many cases.

The selection of the procedure to be employed is a matter of judgment. Neither total nor subtotal abdominal hysterectomy should be regarded as the invariable method of attack nor should vaginal hysterectomy be employed in cases not adapted to approach from below. It should be regarded as a principle that the operation should be fitted to the patient rather than that the surgeon should have but one method which he applies to all cases. In choosing the operation a number of factors are to be considered. These are, the disease for which the operation is done, its extent, the parity of the patient, her age and physical condition, previous operations, the condition of the vaginal outlet and the surroundings in which the operation is to be done. One other extremely important matter must be considered, the experience and skill of the surgeon who is to operate and his experience with the various types of hysterectomy.

Many of those who have favored the total removal of the uterus have based their arguments upon the danger of the development of cancer in the retained cervical stump. This danger certainly exists, for in 1934, Von Graff was able to collect 1169 cases. A study of the figures of five large American clinics in 1941 showed that, of all the cervical cancers seen, 4.01 per cent were in the cervical stump which remained after subtotal hysterectomy.

This, in all probability, does not give an accurate figure of the frequency of stump cancer for there are many thousands of women in the country who have undergone sub-total hysterectomy who have never had reason to consult a surgeon again. If all of these were counted the incidence of stump cancer would be less. The danger does exist although it is not a serious one. This reason alone would not justify the removal of the cervix routinely or even frequently unless the operator is a surgeon of sufficient skill that the risk of the total operation is not greater than that of the lesser procedure. Another reason exists which has been emphasized both by Masson and by myself. This is the fact that the retained cervical stump is often an unhealthy mass of tissue which is likely to be the source of discharges and at times of bleeding. The cervical stump which gives rise to a leukorrheal discharge does not respond well to treatment for it has a poor blood supply and is therefore of low resistance. Infections may, in some cases, erode a vessel and cause bleeding. Polyps may form. In a minority of cases the retained stump becomes a focus of infection. All of these causes may necessitate the removal of the retained stump some time after the excision of the body of the uterus. An irritable bladder may cease to be troublesome after the excision of an unhealthy

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, September 25, 1942.

stump. All of these experiences have occurred in our own work.

It was the comparative freedom from these annoyances enjoyed by our patients upon whom we had done vaginal hysterectomy which caused us to begin the more frequent use of the total operation in those cases in which the abdominal route is employed. These women did not return because of annoying discharges or bleeding. If the condition for which the operation was done was relieved, they required no later treatment for symptoms arising from the cervix.

In any institution in which a considerable amount of work is done, many cases are seen in which a choice of technique must be made. In an active service, devoted to gynecology and obstetrics and staffed by trained men, the choice of procedure should not be influenced by the inability of the operator to do one or another of the possible procedures.

We may pass over carcinoma of the cervix, for in our work, as in the majority of American clinics, the great majority of these are treated by irradiation. We are accustomed to treat surgically only those cases in which the cancer is quite small and definitely localized without possibility of extension. These are not often seen. We do not favor the extended operation with dissection of the lumbar glands. Carcinoma of the corpus, on the other hand, is, in the majority of cases, best managed by total hysterectomy, which need not be of the very radical type needed when cancer of the cervix is attacked surgically.

In dealing with carcinoma of the corpus our preference is for the abdominal operation. The first move, after opening the abdomen, is to place a straight clamp on both sides, parallel with the lateral aspect of the uterus. These preclude the forcing of carcinoma cells through the broad ligaments during the operation, when the uterus must necessarily be handled to some extent. These clamps serve in place of a volsellum forceps, thus avoiding the wounding of the uterine wall. When the operation is done from below, the upper part of the broad ligament is not occluded by clamps until a late stage of the operation, and, as the uterus must be traumatized during the process of delivering it, both by the hands of the operator and by instruments, the likelihood of escape of malignant cells exists. As the carcinoma is in the body of the uterus, the importance of shutting off the possibility of escape from the upper part of the uterus is easily seen. While it is perfectly possible to excise the adnexa vaginally, we like to ligate the infundibulo-pelvic ligament and the round ligament well outside the adnexa at an early stage of the operation and this is more easily done from above.

The surgical management of myomata of the uterus is one of the most common duties of the gynecological surgeon. Many of these are found in women in the middle decades and the majority of women at this time of life have borne children. Cervical damage, therefore, is common. It has been pointed out of late that about one third of the cancers of the corpus are associated with myoma of the uterus. If the case is one of myoma, unassociated with extensive inflammatory residues or endometriosis, and if the surgeon is equipped with sufficient experience to deal easily with a procedure which is somewhat more complicated, the total removal of the uterus is good treatment. If inflammatory or endometriotic pathology is found, it may be wiser to amputate the uterus above the vagina. If the familiarity of the operator with pelvic anatomy and technique is not extensive it may be wiser for him to be content with a supravaginal excision. The majority of our abdominal hysterectomies for myoma for some years have been total.

In some of the cases of myoma is found a good field for vaginal hysterectomy. We have had very satisfactory results with myomata of moderate size, associated with outlet relaxation. Particularly when the cervix is not healthy the removal of the uterus through the vagina offers a means of relieving the patient of the tumor and the cervix and at the same time of doing a necessary outlet plastic. This subjects the patient to much less strain than a plastic followed by a laparotomy. We have found it possible to do these operations, including the plastic work, in nearly all cases in less than an hour. Larger tumors may be removed piece-meal, or morcellated. This is a rather more extensive procedure which had best not be attempted until experience in the vaginal field has become fairly ample. A simple type of morcellation which is often of great assistance when it is difficult to turn the uterus as it is brought out into the vagina, is the amputation of the cervix. This reduces the elongated pear-shaped uterus to a roughly ball-shaped mass which may be turned almost at will.

The delivery of the corpus is often made much easier.

Inflammatory residues often require extensive dissection. The cervix in most of these cases is also unhealthy and, if the uterus is to be excised, the woman will be better off without it. The decision as to its removal will depend upon the difficulty with which the uterus and adnexa are freed from their bed and, again, upon the experience of the surgeon. It may be wise to stop short of the removal of the cervix rather than to expose the woman to greater trauma than she should be expected to endure. When possible it is wise to excise it. When dealing with endometriosis, because of the invasion of the uterine and bowel wall by the adenomatous process, amputation of the body of the uterus is frequently safer than an attempt to remove the cervix, which may necessitate shaving off a layer of uterine tissue.

Functional bleeding in the fifth decade, particularly in the early forties, may be well managed by vaginal hysterectomy. Especially is this so when endocervicitis and outlet relaxation are present. Irradiation in these younger patients subjects them to considerable discomfort because of the surgical menopause. In common with others, we, when the enthusiasm for radium was at its height, treated many cases of functional bleeding by irradiation. The incidence of severe menopausal symptoms caused us to restrict this mode of management to older women, and, as our experience grew, we used radiotherapy for the control of nonmalignant bleeding less and less. A large proportion of these patients are now treated by vaginal hysterectomy, leaving the ovaries intact. In many of them the cervix is unhealthy and some need exists for plastic work. Retrodisplacement in women past the age at which further childbearing is desirable may well be dealt with by vaginal removal of the uterus. Again cervical abnormality and relaxation are frequent. It seems wiser, when the uterus is no longer of value, to remove it by a procedure which is accompanied by very little shock, rather than to do a laparotomy to correct the position of an organ which has served its purpose, leaving the cervix and outlet to be dealt with by another operation.

In most clinics in this country extreme descensus, or prolapse, is dealt with either by vaginal hysterectomy or by some form of the Manchester operation. My preference is for the removal of the uterus with interposition of the broad ligaments under the bladder. The excision of the posterior peritoneal pouch is needed in some cases and the utero-sacral ligaments should be united in all cases. This procedure has been carried out on many old women with no difficulty. One woman in the seventies had a coronary occlusion about a week after the operation but recovered and it was not thought that the operation was to blame. Shock is usually absent and these old patients almost always recover smoothly. The operation is almost extraperitoneal and there is little blood loss.

The results of operations for the removal of the uterus are today in well-staffed clinics, very satisfactory. In a series of 1510 hysterectomies of various sorts in our own clinic the mortality was 0.4 per cent. Of these 795 were subtotal, 230 total abdominal, and 485 vaginal. Vaginal hysterectomy was employed in 32.3 per cent of the cases. During the past two years we have come to employ the total operation much more frequently, in cases done abdominally, than previously. In the year ending March 31, 1942, of 191 hysterectomies, 131 were done abdominally and of these 80 were total. There were 60 vaginal hysterectomies. The uterus was therefore removed entirely 140 times. In this recent series of 191 cases there was no death. They are included in the larger series of 1510. There is no way of removing the uterus without passing through an unaseptic area. Morbidity therefore appears in any series of hysterectomies. Morbidities in the smaller and later series of 191 were as follows:

Totals, 43.75 per cent, subtotal abdominal 47.06 per cent, vaginal 60 per cent. This is calculated according to the standard of the American College of Surgeons which includes all cases in the morbid category which have a temperature of 100.4 degrees on any two days excluding the first postoperative one.

Technique

The decision as to the technique to be employed should be made upon grounds which are anatomically and pathologically sound. The argument is sometimes advanced against the total operation that the removal of the cervix deprives the vaginal vault of support. The cervix, whether the uterus is present or has been removed,

supports nothing. The uterine supports are found at the level of what has been termed the upper pelvic floor and consists of the cardinal ligaments, the utero-sacral ligaments, and the pubo-cervical fascia. All these are merely thickened parts of the supporting diaphragm found at that level. If support is needed, it will not depend upon the type of the hysterectomy but must be provided by a proper utilization of the structures which normally hold up the uterus and the vaginal vault. Every pelvic surgeon of experience has seen patients who have had subtotal hysterectomies and whose cervices have come down. In most of these cases a descensus was present at the time the operation was done but no provision was made for the rectification of the failure of support. In many cases of descensus, unless some contra-indication exists, a vaginal hysterectomy may be done and the supporting structures may be dealt with in such a manner as to ensure the vaginal vault remaining in its normal location. When the uterus is removed totally by the abdominal route, the bases of the broad ligaments, or the cardinal ligaments, should be attached to the angles of the vaginal vault to provide the support without which it may come down. In some of the cases of descensus of the retained stump which have come under my observation it has seemed that an incidental condition was dealt with while the essential one was ignored. For example, a woman upon whom a subtotal hysterectomy had been carried out for a small fibroid while no attention had been given to the marked descensus which was also present. Attachment of the round ligaments to the stump of the cervix for support is useless. The round ligaments have nothing to do with support, being concerned only with the maintenance of the uterus in its normal position. Some gynecologists express a doubt as to the amount of effect they exercise even in this. In any event, they do not support the uterus and recurrence of the descensus is almost inevitable.

In the treatment of marked descensus, or prolapse, one still sees occasionally a patient whose uterus has been attached to the anterior abdominal wall, or upon whom a subtotal hysterectomy with attachment of the stump to the abdominal wall has been done. These cases, practically without exception, have been done by general practitioners or general surgeons whose acquaintance with gynecology is not intimate. The operation has practically disappeared from gynecological clinics. Recurrence of the descensus often takes place and the correction of the condition by a hysterectomy done from below is often difficult because of the false ligament which has formed between the fundus of the uterus and the abdominal wall and which prevents the turning of the uterine corpus out into the vagina either through the anterior or the posterior vault. This method of managing uterine descensus should give way to more efficient forms of treatment based upon accurate knowledge of the mechanics of uterine support.

The training and experience of the surgeon are of great importance in the selection of operation. In clinics in which gynecological operative work is done by a group of men of adequate experience, and in which the bulk of work is enough to maintain a marked degree of operative dexterity, the total abdominal operation appears to be gaining. The frequent use of the total operation, for conditions other than cancer of the corpus, is not justifiable unless the mortality of the operation is the same as that of the subtotal.

In estimating mortality each clinic or hospital should know what its own mortality figures are. To quote to a patient figures given in a paper from some other clinic merely indicates what the risk would be if the patient went to that clinic and do not show what the danger is in the hands of the man who quotes them. The total operation is more difficult, and the danger of injury to the bladder, and particularly to the ureters, is greater. There is more danger of bleeding, both during the operation and afterward. It is not good judgment to assume a markedly increased operative risk to escape a problematic risk of cancer at a later date, especially as only a small minority of the patients will get it. Vaginal hysterectomy, while it presents no difficulties in most cases to those surgeons who have become quite familiar with it, seems difficult to many operators and even gynecologists of many years of experience are, at time, hesitant about adding it to the list of their available operative procedures. The doctor who does his own operative work is wise to make use of the subtotal operation. Vaginal hysterectomy requires an exact knowledge of the relationships of the bladder, ureters, and pelvic blood supply. That it is possible to make use of both of these operations

freely without increasing the danger to the patient is evidenced by the reported figures from a number of clinics. Our own experience has borne this out. We have had a higher mortality in subtotal hysterectomy than in the total abdominal or the vaginal operations. This is because the less extended operation tends to be used in cases in which extensive adhesions are found and the difficulty of removing the uterus is greately increased.

If one will examine a considerable number of cervices microscopically it is easy to see why trouble may occur even though no malignant growth appears. An abnormal degree of epithelial activity may be observed in many cervices in which no suggestion of malignancy may be seen. I do not care for the term precancerous but many of these epithelial changes would be termed precancerous by some pathologists. In any event, the degree of activity is too great for the surgeon to regard it with complete equanimity and the finding of such changes in the microscopic section after operation makes one happy that the cervix has been done away with. In a very recent case, cared for by one of my associates, a tiny lesion was seen on the cervix which could not be identified as cancer. A specimen taken with a punch forceps revealed, under the microscope, a very small but unmistakable cancer. For some time after malignancy has begun it is impossible to identify it as such. Some time ago in another specimen of the uterus, removed in our service, was found an entirely unrecognized cancer. A vaginal hysterectomy had been done for a small fibroid associated with a moderate descensus.

It is not wise to suggest that total abdominal hysterectomy or vaginal hysterectomy be employed routinely by every operator. We do not always include the cervix in the structures removed. The cervix should, however, be carefully studied before operation. If it is quite healthy it may remain; if it is infected or notably damaged, and if the operator feels able to do the total removal without increase of risk, a total operation is better; or the uterus may be removed vaginally unless some contra-indication exists to the employment of that procedure. If an unhealthy cervix is left, it should be dealt with later either by cauterization or by plastic surgery.

The operator of less experience will be wise to make use of the less difficult subtotal operation. The gynecological specialist should be able to do any one of the three types of hysterectomy with sufficient ease that his choice of operation in any individual case is not influenced by his inability to do one or another. A considerable group of cases are very advantageously handled by vaginal hysterectomy. These patients should be given the benefit of the procedure best fitted to the condition which they present. In other words, the operation should be adapted to the patient, not the patient to the operation. In the hands of experts, many gynecological patients may be given the added advantage of the removal of the often unhealthy cervix. Others are wiser to make use of the simple subtotal operation.

MSMS

Medical Aspects of High Blood Pressure (Hypertension)*

By Irvine H. Page, M.D.†
Indianapolis, Indiana

A.B., Chemistry, Cornell University, 1921; M.D., Cornell University, 1926; Presbyterian Hospital, New York, 1926-28; Kaiser Wilhelm Institute, 1931-37; Associate Member of Rockefeller Institute, 1928-31; Director of Clinical Research, Lilly Laboratory, Indianapolis City Hospital, 1937 to date; author of "Chemistry of the Brain."

The evidence in favor of hypertension being due to chemical substances liberated from the kidney will be given. It will be shown that the substance named angiotonin when injected into animals and human beings quite closely reproduces the physiologic changes which are known to occur in hypertension produced experimentally in animals and spontaneously occurring in essential hypertension in man. Treatment of the disease in man will be discussed from the surgical and medical point of view. An attempt will be made to indicate that orderly progress is being made in the understanding of this disease which is killing more people than any other.

■ HYPERTENSION is now recognized as probably the chief cause of death in this country. And this is being driven home by the great number of hypertensives being discovered among the

*Read before the Seventy-seventh Annual Meeting of the Michigan State Medical Society, at Grand Rapids, Michigan, September 24, 1942.

†Lilly Laboratory for Clinical Research, Indianapolis City Hospital, Indianapolis, Indiana.

civilian population by the medical examiners of the army and navy. It is appalling the number of men who are being rejected because of hypertension or being retired from the services.

Serious investigation into the nature of hypertension doesn't go back many years and by the same token most of the subject remains for investigation. Nevertheless, certain very fundamental changes have occurred in our thinking in the past ten or more years which will inevitably affect our bedside practice in the understanding and management of hypertensive patients. These changes in thinking are important, and for this reason, I will list four of them that I consider of especial importance.

1. It has finally come to be realized that hypertension serves no useful function to the body and that it is not necessary that arterial pressure be elevated in order to insure efficient renal function, even though the vessels may be narrowed. Nor is it necessary to maintain adequate perfusion of peripheral tissues. Hence, arterial pressure can be lowered without interfering with bodily function. It should not be forgotten that it is not long ago the opposite was the common teaching.

2. A second change is the realization that hyperactivity of the nervous system is not the primary cause of arterial hypertension though it may play an important part. Most work supports the view that a chemical substance liberated by the kidneys elevates the blood pressure. The nervous system undoubtedly mediates the demands of the body for quick changes in blood distribution, but the long swing changes are caused by humoral agents. There is good reason also to believe that the nervous system is concerned with the maintenance of the reactivity of the body to humoral agents.

3. A third change of great importance is the demonstration that while renal excretory function may be normal in hypertensives, profound changes in the distribution of the blood within the kidneys have taken place. It is plainly and simply incorrect to define essential hypertension as a condition in which renal function is normal. Renal excretory function is, but other functions are not.

4. A fourth change is the elaboration of methods which would reproduce hypertension in animals with fidelity. The two methods now in common use are compression of the main renal artery by means of clamp and compression of the renal parenchyma by the scar resulting from perinephritis induced by wrapping the kidneys in cellophane or silk. These methods have made possible extensive studies into the mechanism of hypertension which would not, for the most part, be possible in patients.

I need not labor the point that these profound changes in the fundamentals of hypertension have taken place. Much of the knowledge has not been appreciated by clinicians in their thinking, nor found application at the bedside.

But without going deeply into the fundamental investigations involved, let me give you a thumbnail sketch of our views on the mechanism of hypertension. We think that reduction in pulse-pressure and possibly temporary drop in blood flow may start the renal vasopressor system into action. What is responsible for this change in pulse-pressure we do not know. An enzyme is contained in the renal tubular cells called renin which is liberated into the blood stream. It acts on the α_2 globulin of the plasma to form a third substance called angiotonin. The globulin incidentally has its origin in the liver. Angiotonin apparently is the substance causing the rise in blood pressure. I want you to note particularly that the rise in blood pressure in both essential, experimental and angiotonin hypertension is of a very special sort. It is characterized by augmentation of the force of the heart beat—hence, the overactivity and enlargement of the heart seen at the bedside; by constriction of the peripheral arterioles without reduction of blood flow—hence the skin and muscles are not pale and bloodless. The changes in the kidneys are peculiar and interesting. In short, the principle change seems to be constriction of the small arterioles proximal and distal to the glomeruli which results in increased pressure within the glomerulus and reduction of peritubular blood flow. The result of this is an artificially elevated urea clearance and reduced ability to concentrate urine; a point of considerable clinical usefulness. More recent work shows that the intrarenal hemodynamics can be more accurately investigated by the insulin and diodrast clearances. Suffice it to say that the former measures glomerular filtration and the latter tubular secretion. In view of the changes of blood distribution I have mentioned, it

is clear why these tests have assumed a place of importance in clinics devoting their time to research on cardiovascular disease. Perhaps we had better term it "angiology," a more inclusive term when one considers the heart is only a specialized portion of the vascular system.

With these notions in mind, it is not difficult to transfer them to clinical practice. For instance, the increased force of the heart beat is most readily appreciated by the hand placed over the precordium. When one has familiarized himself sufficiently with this procedure, a great deal can be learned about the intensity of the stimulus to the heart and its response. Both influence the final outcome especially as regards the myocardium.

The special type of arteriolar and small arterial constriction can be seen and studied in the eyegrounds. And thus, examination and thorough familiarity with the ocular fundi is essential to the proper evaluation of any patient with elevated blood pressure. There is no substitute for the careful and repeated examination being performed by the internist himself. This is the place the intensity of the vasoconstriction may be measured, the earliest signs of degenerative changes detected, and the signs of necrotizing arteriolitis, papilledema, retinal edema and detachment, thrombosis, etc., first noted. If I were required to give up all other examinations but one during the investigation of a hypertensive patient, I would retain the pleasure and privilege of examining the eyegrounds.

There are many other clinical applications of these principles but these examples will, I hope, illustrate my meaning. The adequate examination and "pedigreeing" of hypertensive patients has now become an elaborate procedure in terms of the examinations given only several years ago. And at the same time marked improvement in the accuracy of prognosis and diagnosis has occurred. We hope it is also leading to much more convincing results obtained from observation of experimental treatments. As you are aware, many of the claims made for treatments were not made dishonestly but the observer was fooled by the natural variability of the disease. There is less and less reason for such mistakes in the future.

Treatment of hypertension is still an experiment. Practicing physicians are naturally anxious for practical means of handling hypertensives and are sometimes impatient with the bumbling efforts of investigators. Brother investigators are with less reason impatient and deserve a gentle but firm rap on the knuckles for it. Impatience leads to forced conclusions rather than the truth.

To our minds at the Lilly Clinic, we believe that when the operation is adequate, sympathectomy has its place in the management of hypertensive patients. The selection of patients requires care and experience. Its good effects are not due, as has so often been erroneously stated, to increased blood flow in the kidneys.

Thiocyanate is also a useful drug in our experience, which now comprises some 500 patients. As you know, it should not be used without chemical control and should not be given merely to be giving something. Some patients do not respond favorably and its use in those individuals should not be continued.

Purified renin has not in our hands been able to lower blood pressure in dogs or rats with experimental hypertension even when pellets of renin were implanted. Since we had no success in animals we have not tried it in patients. Wakerlin states that he is doing this, and his report will be awaited with interest.

We have tried large doses—in fact double the dose recommended—of vitamin A in patients but found no change in blood pressure in our "pedigreed" patients. We would not say that when the material is given in even larger doses or over longer periods of time that it is without effect. It may well be that impurities play some part when excessively large doses are employed. Vitamin A or some associated impurity can increase renal blood flow. We have not tried it in dogs but Wakerlin recently published that it lowered blood pressure in dogs with experimental hypertension much as did renin in his experiments on that subject.

We have had no experience with tyrosinase. Schroeder thinks that it reduces blood pressure because of the enzyme in the solution. Apparently others think this also while still others consider the results purely a result of impurities other than tyrosinase.

So-called "nonspecific" therapy has been used for many years with occasional good results. The term itself is almost meaningless and might well be dropped but its use is so current that this would be difficult. Typhoid vaccine given intravenously *to patients with renal disease* may cause

serious loss of renal function. We doubt if it should be given by vein at all to patients with renal disease as a therapeutic measure. Scott has recently claimed that results quite as good as observed with kidney extract can be obtained with milk injections. It will take several years of work for us—at least—to have any sound opinion on this observation. If it works, it will be a godsend, and we all hope it does.

There is good physiological evidence to suggest that the kidneys contain an antipressor agent, hence the search for it. To date it has, I think, been shown that kidney extracts of special sorts can lower blood pressure, reverse many of the retinal changes of the malignant syndrome and alter the change in distribution of blood within the kidney towards normal. I have no idea how kidney extracts work nor whether they are "specific" or "nonspecific." At present we are working along the lines that an enzyme—angiotonase—which is present in large amounts in some of these extracts is the active agent. We don't know whether this is true or not.

I hope you will agree that we are gathering evidence of sufficient importance to help dispel the prevalent appalling indifference to this greatest of public health problems.

MSMS

TANTALUM FOR REPAIRING SKULL DEFECTS

Experimental studies indicate that the mental tantalum is a satisfactory material for the repair of defects of the skull, Lieut. (jg) Robert H. Pudenz, Medical Corps, U. S. Naval Reserve, reports in *The Journal of the American Medical Association* for February 13.

Tantalum is an element, the seventy-third in the periodic table. It is a bluish white metal resembling steel in its physical properties and glass in its chemical characteristics. It has an atomic weight about three times that of iron.

Lieutenant Pudenz says that "It has the desirable qualities of noncorrosiveness, inertness in tissue, nonabsorbability, absence of toxic [poisonous] ingredients and malleability. This last quality enables the surgeon to form the flat tantalum sheet to the desired contour at the operating table. In view of these characteristics, the use of this metal should be considered in the repair of many of the cranial defects which will inevitably occur as a result of craniocerebral [skull and brain] injury in the present war, and particularly in those repairs in which a satisfactory cosmetic result is of utmost importance."

The Therapy of Nevi

Their Relationship to Skin Malignancies*

By Eugene F. Traub, M.D.
New York City

EUGENE F. TRAUB, M.D. *B.S., 1916, and M.D., 1918, University of Michigan; Associate Clinical Professor of Dermatology and Syphilology, Skin and Cancer Unit, Postgraduate Medical School and Hospital, Columbia University. Consulting Dermatologist and Syphilologist to Centril Islip State Hospital, Nassau Hospital and Meadowbrook Hospital. Professor of Dermatology and Syphilology, University of Vermont. Consulting Dermatologist to Bishop DeGoesbriand Hospital, Burlington, Vermont. Fellow, Dermatological Section, New York Academy of Medicine, New York Dermatological Society and American Dermatological Association.*

In dealing with a subject so comprehensive, it will be necessary to limit the discussion to the two principal types of nevi, namely the vascular and the pigmented. Despite many advances in therapy there still are decided differences of opinion as to which nevi should be treated and which should be left alone. Some suggest leaving them alone so that they may either disappear spontaneously or because of fear that treatment might convert a quiescent benign nevus into a malignant one. Such basic considerations in individual cases must be carefully weighed to determine the best procedure to be followed. If errors in judgment and management occur at this time, the most favorable opportunity to achieve a good result is usually lost and subsequent treatment becomes proportionately more difficult and unsatisfactory. Since some nevi may give rise to malignant growths, this fact must also determine our course of action. Fundamentals and actual procedures will be discussed in detail.

■ MOST physicians feel themselves competent to treat nevi of all types. I would hesitate to discuss so prosaic a subject were it not for the fact that most surgeons are not trained to make pre-operative diagnoses and hence frequently make wide excisions and obtain poor cosmetic results when other methods would have proved far more satisfactory. Dermatologists on the other hand not infrequently fail to employ surgical methods when they are imperatively indicated. Furthermore, differences of medical opinion still arise as to choice of treatment of certain nevi when a thorough familiarity with the subject would eliminate such confusion of thought. My reason for again writing on this subject is to try to eliminate this confusion and to standardize therapy.

Many dermatologists believe that *none* of the vascular nevi should be treated. They point out that with the exception of the "port wine" marks,

*Read at the Seventy-seventh Annual Meeting of the Michigan State Medical Society at Grand Rapids, September 25, 1942.

few of these lesions are found in adult life—hence they are of the opinion that the majority of them must have disappeared spontaneously. I do not believe that this is true. Conceding the fact that most of them are no longer present when adult life is reached, I think that in the majority of instances this was accomplished by suitable treatment. What happens to the untreated cases? My investigations indicate that a small percentage either remain unchanged, or may actually increase or slightly decrease in size. The point is that they do not all disappear. Furthermore, when nature undertakes to destroy an angioma for example, she does not always do a creditable job—in fact the majority undergo spontaneous involution as a result of infection and ulceration. If the ulceration is superficial the scar may be inconspicuous, but if the process is deep, an ugly scar may result. Children are quick to note and comment on birthmarks in other youngsters and while this should not cause an inferiority complex, most parents like to avoid the possibility. A neglected vascular nevus becomes increasingly difficult to remove as the child grows older.

If an anxious parent can be given reasonable assurance that her child's nevus can be destroyed by careful treatment, in most instances without scarring, is it wise to suggest to her to await developments, the exact nature of which no one can foretell? I do not believe that it is. I feel that it is better to recommend treatment at the earliest moment since, then, therapy requirements for effective results are minimum.

If treatment is decided upon, what method is best for the various types? Admittedly, each case must be individualized, but the accompanying outline will give you in order of their choice, the therapy best suited for each type. Where two methods are, in my opinion, of about equal merit, I have indicated this by the use of brackets.

Inasmuch as most physicians are no doubt thoroughly familiar with the outlined therapy only a few explanatory comments are necessary. In the case of the flat (nevus flammeus) nevi, unless the lesion is small and favorably located, I believe it better to leave this type of mark alone. Large lesions when not treated with applications covering the entire mark at one time may develop a checker-board appearance that may look worse than the original defect. Radium applications should not be followed by the use of solid ice but the reverse is permissible.

TREATMENT OF VASCULAR NEVI

I. *Flat* (Nevus flammeus):
   1. No treatment—use cover if feasible.
   2. Massive doses ultra-violet light preferably with pressure through quartz applicator.
   3. Solid ice
   4. Light desiccation
   5. Radiation — Grens rays / Radium / Thorium paste

II. *Raised* (angiomas)
   1. Radium — Surface application / Needle insertion / Radon
   2. No treatment—await possible spontaneous disappearance
   3. Solid ice
   4. Injection of sclerosing solutions
      (a) Quinine urethane
      (b) Sugar
   5. Surgical excision
   6. Cautery
      (a) Hot
      (b) Cold

III. *Deep* (cavernous angiomas)
   1. Radium (insertion or application on block)
   2. Injection of sclerosing solutions
   3. No treatment (Spontaneous disappearance)
   4. Surgical excision.

IV. *Lymphangiomas*
   1. Cautery — Hot / Cold
   2. Radium (Contrary to the belief of many, radium results often satisfactory)
   3. Solid ice
   4. Surgical excision

V. (a) So-called *senile* angiomas
      1. Cautery puncture
   (b) "Spider" nevus (Nevus araneus)
      1. Electrolysis
      2. Cautery puncture

In the raised and deep vascular nevi (angiomas) radium has been given first choice over solid ice and sclerosing solutions because of its safety (deaths from sclerosing solutions have occurred, though so far as I know, have not been recorded), and its lack of pain or discomfort following the treatment. When using radium it is essential to start therapy early, give small suberythema doses, with long intervals between the treatments. In the case of spider nevi, especially in infants or small children, electrolysis is much safer than cautery puncture and also less painful and less likely to give rise to a tiny pitted scar.

The problems are not as simple when dealing

with the group of pigmented, hairy or warty nevi. This is in part due to the mixed or combination varieties that occur and also because a large number of other skin tumors or granulomas simulate these lesions. For example, when we were selecting specimens of the intradermal nevus ("common mole"), of the first 80 selected, 11 proved to be early basal cell epitheliomas, fibromas, triecho-epitheliomas, connective tissue nevi, etc. Such mistakes I am sure, explain some of the erroneous ideas that the intradermal nevus can terminate in any of the types of epithelial cancer.

When one listens to or reads the discussion of various physicians, one realizes that it is difficult for some to understand the full meaning of the term "benign." They speak of a "benign" lesion which on removal gave rise to widespread metastasis. If the lesion had been benign and had been properly removed that would have been the end of it. I stress this point because I have always recommended the removal of nevi —especially questionable types—while it was safe to do so. In other words, while they were benign. If there is any question in the physician's mind as to the innocent character of a skin lesion, either a biopsy or a wide excision should be done to settle the point. Were this done regularly, much difficulty would be spared the patient and if the cosmetic result was not perfect—that can easily be remedied later. When dealing with a malignant growth in this group, only the most radical surgery should be employed.

TREATMENT OF PIGMENTED, HAIRY AND WARTY NEVI

I. (a) *Intraepidermal Nevi:* (Warty, hard always, pigment varies, hairs usually not feature.) Changes in this type occur solely in the epidermis and the group includes the hard warty nevi, the linear warty nevi, the nevic type keratomas and the purely epithelial growths.
   1. Desiccation followed by curettement (or curettement alone)
   2. Radiation { x-rays / radium
   3. Solid ice
   4. Surgical excision

   (b) May terminate as squamous or basal cell epitheliomas.
   1. Surgical removal
      (a) Electric cutting current
      (b) Scalpel
   2. Radiation
   3. Combination of above

II. *Junction Nevi* (Epidermal-dermal junction) (Pigmented always (rare non-pigmented lesions excepted) soft warty sometimes, hairs usually absent.) Group includes some of the lentigines, especially lentigo maligna, nevus spilus, nevus pigmentosus and those in which the changes are taking place at the epidermal-dermal junction.
   1. Excision { Scalpel / Electric
   2. Radiation—*never*
   3. Solid ice or chemical applications—*never*

   May terminate as malignant melanomas.
   1. Excision
   2. Radiation may be used as supplemental therapy or in inoperable patients.

III. *Intradermal Nevi* (soft warty always, pigment varies, hair usually present). This is the so-called "common mole." The lesions comprise nevus pigmentosus et verrucosus et pilosus although all lesions need not be hairy or definitely pigmented. The changes all are to be found in the cutis.
   1. Desiccation
   2. Electrolysis
   3. Surgical excision

   Does not terminate in malignant growth.

IV. *Blue Nevi* (pigmented only)
   1. Excision
      (a) Scalpel
      (b) Electric

   May terminate as melanosarcoma in rarest of instances.

V. *Mixed or Combination Types*
   These cause confusion which can only be eliminated when microscopic examinations are carried out in doubtful cases in conjunction with other appropriate treatment.
   Since these lesions consist of mixtures of any of the above types many combinations are possible. We found the following combinations fairly frequent: intraepidermal and intradermal nevi, junction and intradermal. Other combinations, such as intradermal and blue nevus, et cetera, were rare.

The intraepidermal nevi are not dangerous lesions and can usually be relatively easily identified by their superficial character. For greater details as to the clinical lesions included in this classification, which has a purely histologic basis, the reader is referred to two previous articles.[1,2] The hard warty nevi rarely terminate in cancer —the nevic type of keratoma (seborrheic keratoma) probably only slightly more frequently.

The epidermal-dermal or junction type nevi are by far the most intriguing as well as the most dangerous group. Here it is frequently impossible to be certain clinically whether the growth is benign or malignant.

For this reason I believe that applications of

solid ice or chemicals, are contra-indicated. One only needs to follow a single patient so treated to the autopsy table to realize how easy it is to mistake a malignant melanoma for a benign pigmented nevus and to know that such deaths are entirely preventable.

Case Reports

A few brief case reports to illustrate:

Case 1.—Miss C. A. J., aged fourteen, had a "benign" pigmented nevus on the left leg treated with solid ice by an exceedingly competent dermatologist. Within a year a number of pigmented satellites appeared about the treatment site. Removal for diagnostic purposes proved the growths to be metastatic melanomas. Amputation of the leg was advised but refused. Local metastasis continued to appear on the leg for several years and this was followed finally (within six years) by general metastasis and death.

Case 2.—Mrs. W. N., aged forty-seven, had a small smooth "benign" pigmented mark on the bridge of the nose treated with solid ice. First local metastasis to surrounding skin followed by a general process.

Case 3.—Baby A. Z., aged two years, was born with a large brown pigmented nevus on the left cheek measuring about 2½ m.m. in diameter. With the exception of a small area in its center which was brownish black the color was a uniform dark brown. Fine inconspicuous downy hairs were present so that hairs were not an essential feature of the lesion. The nevus increased in size only in proportion to the growth of the child. The patient was presented before a medical society for therapeutic suggestions. Several men suggested the use of Co_2 snow. As the area was rather large I felt that a better cosmetic result could be achieved by plastic surgery and also the area in the center was not above suspicion as a malignant melanoma. This was confirmed on removal by the laboratory, their report being, malignant melanoma. Since less than a year has elapsed since excision the final outcome cannot be stated. There is no question, however, but that Co_2 used on a malignant lesion—mistaken for a benign one—would have been disastrous.

Briefly, when in doubt, all lesions belonging in the group of the pigmented, hairy, and warty nevi should be either excised or biopsies should be performed. This is especially important in the case of the so-called junction nevi where microscopic confirmation is always imperative. Although the blue nevi are practically always innocent the only satisfactory way to get rid of them, because of their depth, is by excision. The common mole and the intraepidermal nevus will safely tolerate dessication, Co_2, and the less radical forms of therapy. Strict adherence to the outlined therapy will prove to be decidedly advantageous.

References

1. Traub, Eugene F., and Harry Keil: The "common mole," its clinico-pathologic relations and the question of malignant degeneration. Arch. Derm. and Syph., 41:214-249, (February) 1940.
2. Traub, Eugene F.: Congenital anomalies (nevi) and their relationship to cancer. Penn. Med. Jour., 44:1103-1110, (June) 1941.

ARMY'S 1943 RECRUITING PROGRAM WILL REQUIRE 6,900 PHYSICIANS

The 1943 recruiting program of the Surgeon General of the Army calls for the commissioning of 6,900 physicians and approximately 3,000 hospital interns and residents, it is reported in *The Journal of the American Medical Association* for March 13 in an outline of the new procedure of processing physicians, dentists and veterinarians for the Army. The program also calls for the commissioning of 4,800 dentists and 900 veterinarians.

Physicians will be procured from the following twenty states and the District of Columbia: California, Colorado, Connecticut, Illinois, Iowa, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont and Wisconsin.

It is stated that at present there will be no procurement of physicians, except interns and residents and in special cases for specific position vacancies, in those states not listed above.

In the instructions issued by the Army it is pointed out that the Surgeon General has discontinued all medical officer recruiting boards.

In each state the Procurement and Assignment Service has set up three state chairmen: medical, dental and veterinary. Each of these prepares a monthly quota list of physicians, dentists and veterinarians who are apparently suitable and who are available, for commissioning in the Army of the United States. This list is submitted to the central office of the Procurement and Assignment Service which sends a communication inviting such individuals to apply for service with the armed forces. On the reply card enclosed with the invitation the individual states his preference for the Army, Navy or Medical Department of the Air Forces. These reply cards are sent by the potential applicants to the state chairmen of the Procurement and Assignment Service who in turn submit lists of such potential applicants to the Officer Procurement Service of the Army.

On receipt of such lists the officer procurement district office contacts the potential applicant and arranges for an interview regarding a commission.

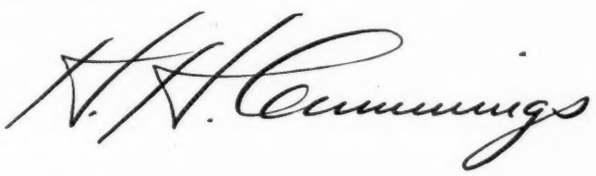
The decision as to the grade and appointment to be recommended for each candidate rests with the Surgeon General, not with the Officer Procurement Service.

The General Practitioner of Medicine

IN THESE days of warfare the newspapers are filled with the names of military leaders. Occasionally, a news story will carry the name of a private who has been on the front line and has borne the brunt of the enemy's onslaught. In the field of medicine, also, the names of medical leaders and specialists appear in the public press and on the programs of national and state meetings, but little is said about the general practitioner of medicine who, regardless of time, place, and weather, renders service to 80 per cent of the people needing medical care.

The general practitioner of medicine, or the family doctor as he is affectionately designated by most people, has always stood in the front line in the battle against disease. Only rarely has his splendid, unselfish work been recognized by the organized medical profession. There are signs today that the physicians who bear the larger share of the load of rendering medical service are being appreciated. One of the signs is the development of extramural postgraduate medical education. Most of the specialists, through specialty meetings and publications, keep abreast of the times in their own fields, but for years no such opportunity has been available to the general practitioner. Today the advances in medicine are brought to him through planned conferences on medical progress, so that he is able to render better service to his patients. Another sign of recognition is the fact that the American Medical Association and several state societies are devoting part of their annual deliberations to a consideration of the problems of the general practitioner.

Scattered over our state are many modern, general hospitals. The staffs of these hospitals are as a rule made up of the most progressive members of the profession. Many good general practitioners of medicine are excluded from working in these institutions, but their referred work is gladly received. Hospital affiliations and staff memberships would be stimulating to most of our family doctors; they have earned these privileges. Undoubtedly, it would be necessary to have hospital supervision and advisory guidance but the benefits of advice and consultation to the general practitioner and to his devoted patients would be unlimited. The problem is not a simple one, but it offers a challenge of solution to the Michigan State Medical Society.



President, Michigan State Medical Society

☆

President's

Page

☆

EDITORIAL

MEDICAL MEETINGS

■ The American Medical Association and many other national groups have cancelled their annual meetings for the duration of the war, as a means of conserving transportation, and as a patriotic duty. Smaller, state groups have in some instances followed suit. Cancelling the Michigan State Medical Society 1943 meeting was considered, but the Council after due deliberation vetoed the idea. Other states have followed the suggestion, notably Texas, Nebraska, Ohio, with a one-day meeting, et cetera.

If there was ever a time when these meetings were needed for their moral and educational value, this is it. With our national meetings gone there is still necessity for educational purposes. Medical men can still write papers and have them published in the Journals, but they are only read, the reader losing the personal touch of seeing and possibly meeting and talking with the essayist. The tone and inflection of voice and the nuances of expression are impossible to transmit to the printed page.

Doctors doing two or three times their regular amount of work have little time during office hours to do any reading, and when they get home at night they are so completely exhausted the only thing they feel like reading is some interesting story, or some light reading. Medical articles are laid aside for some time when they feel more in the mood. We know the feeling, but that means new medical information must be secured by the more painless method. The medical meeting, no matter how small, is the opportunity. And the most valuable part of medical meetings is likely to be in the halls and cloak rooms, where a few get together and discuss their many problems. That contact which most of us prize so highly will be denied to us so far as the national society is concerned, but has been retained in Michigan.

Medicine is progressing rapidly as a result of war opportunities and research, and those advances will be brought to us at our meetings much more effectively by contact and personal word than is possible by publications. With such rapid changes of ideas and practice taking place, now is the time when our members should miss no opportunity for exchange of ideas and opinions. We should attend every county, district or state meeting that occurs. It is difficult to arrange good programs such as obtained before the war, but meetings should be held even if there is no set program. Some member will be able to make a worthwhile suggestion, and after the start has been made others will follow.

Even impromptu county society and staff meetings are packed with good from which all may profit.

THE SEVENTY-EIGHTH MEETING

■ The Committee on Scientific Work of the Michigan State Medical Society, which is preparing the program for the seventy-eighth annual meeting, is hard at work, and will produce another of those wonderful meetings for which our society is justly famous. It is permitted to announce that James E. Paullin, M.D., of Atlanta, Ga., now president-elect, and in September to be the president of the American Medical Association, has accepted an invitation to be present; also Sister Elizabeth Kenny who attracted much attention at our meeting in Grand Rapids last September. Other names of national fame have accepted, and will be announced in time.

The meeting this year is being stressed as a War Postgraduate study course, and a "must" in the program of every one of us. The meeting will be held in Detroit at the Hotel Statler.

POSTWAR DOCTORS

■ What of the supply of Doctors of Medicine for the near future? For after the war, or after the students now in college have finished their training? The outlook is somewhat uncertain, but some facts have become apparent. The teenage boys will be taken into the armed forces. That would curtail the premedical courses, but the Army and Navy departments have intimated that *they* will select from those available, estimated to be about 30,000, about five or six thousand to take a "telescoped" premedical course. The present three years required by

many schools and states will be reduced to two and that "telescoped" into 15 to 18 months. They will then go into the Medical School where the four-year course will be accomplished in three years as under the present plan.

They will not be college students, but privates, soldiers or sailors, being sent to school for technical training. They will be in uniform, under a commanding officer, getting full maintenance and tuition. This will constitute 80 per cent of the medical students. The others will be made up of women students and men who cannot pass the physical examinations.

Such a program or a similar one is quite obviously necessary, but what of the future of medicine? The short term squeeze, and the lessened premedic training will make for less well-trained medical practitioners. Why can we not continue to produce well-trained doctors? Now is the time to get them started, truly, but is it wise to reduce the requirements below the standards now set? America has the best trained doctors of medicine in the world. If the war necessities cannot be met without reducing our standards we should restudy those war necessities. We must win the war. And we must provide for the future health of our people. We reluctantly agree with the "telescoping" of these courses, but believe that will reduce scholarship. We do not willingly agree to lessening standards. These standards must be maintained or increased.

KEEP WELL CRUSADE

■ This crusade originated by the Institute on Life Insurance and conducted by public spirited insurance agents in their communities urges to the public five fundamental rules of health: (1) Eat right; (2) Get your rest; (3) See your doctor once a year; (4) Keep clean; (5) Play some each day. The crusade emphasizes to the layman: "Physical fitness on the home front means more planes, more tanks and more ships for our fighting forces. It means increased morale. It means decreased strain on those members of the medical and nursing professions who remain on that home front. Such physical fitness can, we are assured, be achieved by the promotion of health activities in all communities and by the spreading of the message of the five fundamental rules of health."

During 1943 the Keep Well Crusade will continue and will increase in importance because the war production needs of the nation demand the continued good health of the nation. Maximum participation depends on continued good leadership, not only of public officials, but of natural leaders, such as Doctors of Medicine.

BUY WAR BONDS

■ Last month we published the list of our fellow doctors who are in the armed forces, helping to their utmost in the effort to end the War. Are we doing as much? Have we done as much as we can? Those of us left at home are denied the personal efforts of the soldier and sailor, but there is a way to add our might. *Buy War Bonds.* Ten per cent has been asked, but every one of us should do more than what has been asked. It is a pleasure to buy war bonds, and a satisfaction in having done the one thing left for some of us. BUY MORE WAR BONDS.

Communication

Chicago, Illinois
March 19, 1943

Dr. Wilfrid Haughey, Editor
Dear Doctor Haughey:

Your organization will undoubtedly receive a formal invitation to our Annual Meeting, May 18, 19, 20, 1943, but we would like to write you personally asking that you give the meeting whatever boost you can.

Inasmuch as our national medical meetings are to be eliminated we are endeavoring to make this as beneficial to the profession as a whole as is possible.

To keep in touch with recent trends we are setting aside a special Army Day and a special Navy Day. Military medicine will be featured on these days and will do much toward keeping us abreast of these developments.

Conventions have always proven a splendid place to renew old friendships and as an adjunct thereto golf will be on the cards both for individual and tournament play. As usual, of course, the ladies will be provided for through the auxiliary organizations.

Convention headquarters will be at the Palmer House which is splendidly equipped for our purposes with its many exhibition rooms, conference rooms and parlors.

Members in good standing of your organization, being our own good neighbor, will of course be free of any obligation as far as registration charges are concerned. We will be happy to welcome them and promise an outstanding effort in their behalf.

Very sincerely yours,
H. K. Scatliff, M.D.
Chairman, Publicity Committee
Illinois State Medical Society

THE ANNUAL MICHIGAN POSTGRADUATE PROGRAM FOR GRADUATES IN MEDICINE

The Michigan State Medical Society, in coöperation with the University of Michigan medical School, Wayne University College of Medicine, the Michigan Department of Health, and the Wayne County Medical Society, announces the postgraduate courses for 1943.

INTRAMURAL COURSES

University of Michigan Medical School, Ann Arbor

Recent Advances in Therapeutics	May 10, 11 and 12
Anatomy	February 4—May 20 (Thursdays)
Diseases of Blood and Blood-Forming Organs	May 3-7, inclusive
Diseases of the Heart	May 12, 13 and 14
Electrocardiographic Diagnosis	November 15-20, inclusive
Gastroenterology	May 3, 4 and 5
Laboratory Technique	April 26-30, inclusive
Nutritional and Endocrine Diseases of Childhood	May 12, 13 and 14
Ophthalmology and Otolaryngology	April 26-May 1, inclusive
Personal Courses	Throughout year
Roentgenology	April 12-16, inclusive
Summer Session Courses	June 28-August 20

Anatomy	8 weeks
Bacteriology	6 and 8 weeks
Biological Chemistry	8 weeks

Wayne University College of Medicine, Detroit

The Summer Sessions Announcement will contain a more detailed description of these courses and may be had upon request from the Dean of the Medical School, University of Michigan, Ann Arbor.

The courses listed below are open to practitioners of medicine. If credit is desired for an advanced degree, one should examine the bulletin of Wayne University College of Medicine. The numbers in parentheses refer to the numbers of the courses as they are listed in the bulletin.

Fees for the following courses vary. Specific information can be obtained at the office of the College of Medicine.

Anatomy
- (301) Gross, Microscopic, and Developmental Anatomy...Both semesters
- (302) Neuroanatomy and Neurophysiology .....First Semester
- (303) Topographic and Applied Anatomy .....Second Semester
- (308) The Endocrine Glands..... First Semester

Physiology
- (309) Physiology of the Endocrine System .....First Semester

Physiological Chemistry
- (202 Nutrition .....Second Semester

Pharmacology and Therapeutics
- (303) Physical Medicine..Second Semester
- (309) Therapeutics .....Both Semesters

Pathology
- (203) Hematology.....Second Semester
- (204) Parasitology and Mycology.... Second Semester
- (302) Tumor Clinic .....Both Semesters
- (307) Gynecologic Pathology..... First Semester
- (310) Diseases of the Kidneys..... Both Semesters
- (313) Neuropathology .....First Semester
- (315) Pathology of Tuberculosis..... First Semester
- (316) Pathology of Neoplasms..... Second Semester
- (317) Pathology of the Heart and Blood Vessels.....First Semester

Bacteriology and Clinical Pathology
- (202) Clinical Pathology.Second Semester
- (305) Immunology...Time to be arranged

Medicine
- (306) Medical Pathological Conference Both Semesters
- (307) Diagnostic Conference ..... Both Semesters
- (308) Electrocardiography ..... First Semester
- (309) Therapeutic Conference..... Both Semesters

Neuropsychiatry
- (309) Psychotherapy .....Both Semesters

Dermatology and Syphilology
- (308) Seminar .....Both Semesters

Hematology Clinic
- Hematology Clinic .....Both Semesters

THE ANNUAL MICHIGAN POSTGRADUATE PROGRAM

(Continued)

EXTRAMURAL COURSES

Ann Arbor	April 13 and May 11
Bay City	April 14 and 28
Flint	April 13 and 27
Grand Rapids	April 13 and May 11
Jackson	April 6 and 20
Kalamazoo	April 20 and 22
Mt. Clemens	April 14 and 28
Traverse City	April 14 and May 12
Upper Peninsula (Sault Ste. Marie, Marquette, Houghton, Ironwood and Powers)	May 24-28, inclusive

SUBJECTS

The Diagnostic Significance of Pain. Panel Discussion.
Recent Advances in Obstetrics.
Recent Advances in Immunization Procedures.
Newer Concepts in the Diagnosis and Management of Diseases of the Liver. Clinical Dialogue.
The Differential Diagnosis and Management of Hypertension.
The Indications for and the Use of Plasma in Transfusions.

Further information may be obtained upon request.

Committee on Postgraduate Medical Education
Room 2040, University Hospital
Ann Arbor, Michigan

MICHIGAN CRIPPLED CHILDREN COMMISSION

STATISTICS ON CRIPPLED CHILD ADMINISTRATION, MICHIGAN

For Year Ending June 30, 1942

(Official Figures of the Michigan Crippled Children Commission)

Total number of cases (in-patients and out-patients)	4,274.
Total number of institutional days' care	107,317
Average number of days' care per case	28.1
Total dollar expenditure	$441,267.28
Total expenditure per case	$ 103.24
Paid to hospitals (acute & convalescent) (Cost of foster homes, and of braces, not included)	$362,733.19
Expenditure for hospital care per case (in-patients & out-patients)	$ 84.87
Average expenditure per day for hospital care (acute & convalescent)	$ 3.38
Per cent of total paid to hospitals (acute & convalescent)	82.2%
Paid to physicians (in-patients & out-patients)	$ 50,164.86
Expenditure per case for physicians's care	$ 11.74
Average expenditure per day for physician's care	$ .47
Per cent of total expenditure paid to physicians	11.37%

STATISTICS ON AFFLICTED CHILD ADMINISTRATION, MICHIGAN

For Year Ending June 30, 1942

Total number of cases	8,042
Total number of hospital days' care	125,509
Average number of days' care per case	16.2
Total dollar expenditure	$556,254.67
Total expenditure per case (in-patient)	$ 69.16
Paid to hospitals (in-patient care)	$410,421.61
Expenditure for hospital care per case (in-patients & out-patients)	$ 69.17
Average expense per day for hospital care (acute & convalescent)	$ 3.27
Per cent of total expenditure paid to hospitals	74.379%
Paid to physicians	$140,713.10
Expenditure per case for physician's care	$ 18.33
Average expenditure per day for physician's care	$ 1.12
Per cent of total expenditure paid to physicians	25.501%

YOU AND YOUR BUSINESS

SUCCESS IN THE LEGISLATURE, WITH THANKS TO OUR LAWMAKERS

A successful legislative experience was the lot of the Michigan medical profession in the ninety-day session which recently came to an end. During this short and efficient meeting, some excellent health and medical bills were enacted into law, while a number of proposals inimical to the health of the people were killed by the Legislature, not without a struggle. Chief among the "good" bills were the amendments to the Afflicted-Crippled Children Acts, the act to control barbiturates, and the act giving permission to Detroit and Wayne County to build a Wayne University Hospital. On the "bad side" can be listed the ambitious chiropractic and naturopathic requests, and the proposed amendment to the Workmen's Compensation Act to allow free choice of "physician" (including healers other than doctors of medicine).

A more complete report on the proposals which fully occupied the time of the MSMS Legislative Committee will be published at a later date.

Most sincere thanks are extended to the members and officers of the Legislature, to Governor Kelly and Lieut. Governor Keyes, for the courteous reception they extended to the representatives of the medical profession as well as for the thoughtful consideration they gave to medical and health measures coming before them.

VOCATIONAL REHABILITATION

For the balance of the fiscal year—to June 30, 1943—the State Board of Vocational Education is authorizing certain physical restoration services, including medical care, surgical repair, physical therapy, and occupational therapy, for rehabilitation cases, on the following conditions:

1. If it will assist the physically disabled to become employable.
2. If recognized hospitals, doctors, physical therapists, and occupational therapists are used.
3. If no other method of financing physical restoration service is available.
4. If the expenditure in each case is reasonable in amount.

Procedure: first, a medical report is to be made, preferably by the family physician; other consultation may be required. Application for aid shall come chiefly from (a) the applicant himself; (b) the Bureau of Social Welfare; (c) the employment bureau; (d) the physician making examination. If the applicant has not gone to local social agency he is referred back before further action is taken.

Second, financial standing of patient is investigated; aid is not given if patient or some other interested party is able to pay.

Third, free choice of physician will prevail.

Fourth, fees will be based on the fee schedule of the Michigan Crippled Children Commission; if local fees are less and are accepted by the medical profession for the care of afflicted adults, this fee schedule will prevail.

The Vocational Rehabilitation Department of the State Board of Vocational Education will be glad to receive recommendations from county medical societies regarding participants in the medical and surgical services, and suggestions concerning the administration of this work. Further, the Board has instructed its agents to contact the county society secretary when cases arise in the county.

PROGRAM OF THE NATIONAL RESOURCES PLANNING BOARD

Under "Health," the NRPB report which was recently presented to Congress by President Roosevelt would broaden the federal health program.

The present U.S. laws permit grants to states for medical and child health services, for aid to the physically handicapped, as well as for the variegated health work done by the United States Public Health Service.

The proposed NRPB federal program is designed "to meet needs of our people for more adequate care." Stress is placed on maternal and child health; and surplus food commodities would be made available to the entire low-income group.

The American program is not as broad as Britain's Beveridge Plan which would include comprehensive medical insurance and treatment, including hospital and dental care, nursing and convalescent homes; also post-medical rehabilitation.

News Week's Periscope of March 22 reported: "Washington observers credit American Medical Association opposition for the Planning Board's failure to include socialized medicine in its postwar security program."

PERMANENT ADDRESS

Problem of Frequent Changes of Address.—This arises mainly because physicians in military service are being transferred frequently from camp to camp.

The Council earnestly desires that the JOURNAL MSMS shall be received monthly by every military member.

It invites and urges physicians in Service in the United States to certify to the State Society a *permanent address* (i.e., family residence, relative, bank, or trust company) to which THE JOURNAL may be sent, for purposes of prompt forwarding to the final address; if no permanent address is furnished, THE JOURNAL will have to be discontinued where one or more copies are not delivered. (When one's address is changed, THE JOURNAL is neither forwarded to the member nor returned to the printer.)

By certifying a *permanent address,* a military mem-

ber in the States will insure the receipt of his THE JOURNAL MSMS every month and eliminate waste of vital paper during wartime (already cut 10 per cent, with another 10 per cent expected within thirty days).

An APO is considered a permanent address, so members in foreign service need not certify the above information.

MICHIGAN STATE MEDICAL SOCIETY POSTGRADUATE FOUNDATION

The following Resolution was adopted unanimously by the Michigan State Medical Society's House of Delegates at its 77th Annual Session, September 21-22, 1942, in Grand Rapids:

WHEREAS, Michigan is recognized throughout the country as having developed an outstanding program in postgraduate medical education in the country, and

WHEREAS, this excellent program must be expanded to keep pace with improvements in the swiftly-moving science of Medicine, and

WHEREAS, a perpetuation of this program, so beneficial to a continuation of better health of the public, is most desirable, and

WHEREAS, The House of Delegates of the Michigan State Medical Society in September, 1941, ordered the establishment of a Michigan State Medical Society Foundation for Postgraduate Medical Education, and

WHEREAS, after detailed study of this important matter by The Council of the State Society and its Committee on Postgraduate Medical Education, The Council in June, 1942, executed a Trust Agreement, creating the "MICHIGAN STATE MEDICAL SOCIETY FOUNDATION FOR POSTGRADUATE MEDICAL EDUCATION," and appropriated an initial sum equivalent to $10,000 to establish this Foundation, and

WHEREAS, one member of our Society has already provided a substantial sum in his will for the purposes of the Foundation; therefore be it

RESOLVED, that all members of our profession and others interested in competent medical service be encouraged to make generous contributions now, as well as in their last testaments, to the "Michigan State Medical Society Foundation for Postgraduate Medical Education," in the interests of Medicine and the public health of this state.

THE INJUSTICE OF JUSTICE

When the Supreme Court of the United States upheld the conviction of the American Medical Association for its opposition to a questionable type of medical service, Themis, the Goddess of Justice, opened her eyes in astonishment. "This Daughter of the Heavens," representing the personification of "that divine law of right which ought to control all human affairs," lost her Olympian poise and longed for the days of the "venerable deities," when with eyes blindfolded, it was relatively safe to let her sword rest in its sheath—and to hold her scales for the accurate balance of justice which was duly meted out.

Leaving justice out of the question, how can the administration reconcile its ambition for better medical

WAR WORKERS

put back on jobs quickly when you prescribe a

SPENCER SUPPORT

as aid to treatment of

Spencer Sacroiliac Support designed for this woman.

HERNIA

FATIGUE
Due to Overwork

ENTEROPTOSIS
With Symptoms

LOW VITALITY

BACK INJURY

POSTOPERATIVE
Convalescence

WRONG POSTURE
and Symptoms

Spencer Sacroiliac Support designed for this man.

Since each Spencer Support is individually designed of non-stretchable material to meet the specific needs of the patient, it can be—and IS—*guaranteed* never to lose its shape. Why prescribe a support that soon stretches out of shape and becomes useless?

Spencers are light, comfortable, easily laundered. Every Spencer is designed to improve posture and provide the required degree of abdominal and back support.

Spencer Supports are never sold in stores. For a Spencer Specialist, look in telephone book under "Spencer Corsetiere" or write direct to us.

SPENCER *INDIVIDUALLY DESIGNED*

Abdominal, Back and Breast Supports

SPENCER INCORPORATED,
137 Derby Ave., New Haven, Conn.
In Canada: Rock Island, Quebec.
In England: Spencer (Banbury) Ltd., Banbury, Oxon.

May We Send You Booklet?

Please send me booklet, "How Spencer Supports Aid the Doctor's Treatment."

.....M. D.

Address H-4

THE WAYNE UNIVERSITY COLLEGE OF MEDICINE

Annual Alumni Clinic Day

Wednesday, May 12, at 1 P.M.

Horace H. Rackham Educational Memorial Building, Detroit

PROGRAM

1. "Doctors and Drugs on the Civilian Front"

   FREDERICK F. YONKMAN, M.D., Professor of Pharmacology, Wayne University, College of Medicine.

2. "Medical Problems of the War Workers and Their Management in Your Practice"

   JOHN J. PRENDERGAST, M.D., Medical Director, Chrysler Corporation.

3. "Use of the Latest Methods in the Treatment of Burns with Experience Gained from the Boston Night Club Fire"

   OLIVER COPE, M.D., Assistant Professor of Surgery, Harvard University, College of Medicine.

4. *Panel Discussion*—"Problems and Recommendations Concerning the Hospitalization of Your Patient."

   CLARENCE UMPHREY, M.D., Interlocutor —General Practice

   JOHN LAW, M.D., Hospital Administrator

   GORDON MYERS, M.D., Internal Medicine

   HAROLD HENDERSON, M.D., Obstetrics

   A. D. LAFERTE, M.D., Orthopedic Surgery

   JOHN M. DORSEY, M.D., Psychiatry

   CLARK BROOKS, M.D., Surgery

5. Banquet—7 P.M.
   "Geo-Political Aspects of American Security."
   HAROLD E. STEWART, Ph.D., Dept. of Geography, Wayne University.

service with this obstructive attitude toward the best medical service in the history of the world?

If Themis had not deserted the Delphic oracle, we might learn the answer.—Editorial *Journal of the Oklahoma State Medical Association*, February, 1943.

•

We do not raise the question as to whether the Court correctly interpreted the law in each case, but apparently the Washington physicians should have organized a union; the union officials then hire a group of plug-uglies; these goons could then have beaten up the physicians who did not conform to union rules and they could have picketed the hospitals and refused to let supplies be taken to them. In all of these activities they would have been immune from Federal prosecution. What reason is there to believe that Washington, where unions have such powerful friends, would be an exception?—*Wall Street Journal.*

GROUP DISABILITY INSURANCE

A survey presented at the County Secretaries' Conference of January 24 indicated that members of most of the larger county societies are already covered by group disability insurance and that only a few of the smaller societies appeared to be interested. The Executive Secretary of the Health and Accident Underwriters' Conference who addressed the January 24 meeting, felt that if the number to be covered was small, the matter should be delayed pending sufficient demand. In view of the lack of numbers at this time, the Executive Committee of The Council felt that action should be postponed.

STATE AID TO MICHIGAN COUNTIES

State Aid in seventy-three Michigan Counties exceeds local property taxes. The operating expenditures of all State Funds for the last fiscal year were:

Function	Fiscal Year Ended June 30, 1942
General government	$10,437,937.09
Education	62,895,739.15
Public health and medical assistance	5,432,098.41
Mental hygiene	9,890,225.62
Public welfare services	43,194,146.17
Public safety, defense and adult corrections	7,654,596.90
Highways	55,551,006.97
Regulatory services	4,875,088.85
Conservation, recreation and agriculture	4,675,077.04
Debt service	6,060,573.75
Expenditures of state enterprises for capital improvements	157,996.44
	$210,824,486.39

THE STOKES SANITARIUM 923 Cherokee Road, Louisville, Kentucky

Our **ALCOHOLIC** treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director, Established 1904.

Telephone—Highland 2101

COUNTY AND PERSONAL ACTIVITIES

100 PER CENT CLUB FOR 1943

Barry County—H. S. Wedel, M.D. Secretary
Branch County—James Bailey, M.D., Secretary
Dickinson-Iron County—E. B. Anderson, M.D., Secretary
Lapeer County—H. M. Best, M.D., Secretary
Macomb County—D. Bruce Wiley, M.D., Secy.
Manistee County—C. L. Grant, M.D., Secretary
Mecosta-Osceola-Lake—John A. White, M.D., Secretary
Menominee County—Wm. S. Jones, M.D., Secy.
Midland County—H. H. Gay, M.D., Secretary
Muskegon County—Helen Barnard, M.D., Secy.
Newaygo County—W. H. Barnum, M.D., Secy.
Oceana County—W. Heard, M.D., Secretary
Shiawassee County—I. W. Greene, M.D., Secy.
Sanilac County—E. W. Blanchard, M.D., Secy.
St. Joseph County—R. J. Fortner, M.D., Secy.
Ontonagon County—W. F. Strong, M.D., Secy.

The above county medical societies have certified 1943 dues for every member of their respective societies, to be the first 100 per cent paid-up counties for this year. Michigan State Medical Society dues for 1943 are $12.00.

A membership record was established in 1942 when the total number of Michigan State Medical Society members reached an all-time high of 4,714.

Roster Number—A list of all members of the Michigan State Medical Society will appear in the May number, as in the past.

* * *

The Bulletin of the Ingham County Medical Society, February, 1943 issue, lists all the past-presidents of the Ingham County Medical Society from 1901 to 1942.

* * *

A "conference" is a group of men who individually can do nothing but as a group can meet and decide that nothing can be done.

* * *

The International College of Physicians will hold its Fourth Assembly June 14-15-16 at the Waldorf-Astoria Hotel in New York. The program will be devoted to war surgery and rehabilitation.

* * *

"Notes on the Cost of War" is an interesting article containing facts little known, written by H. E. Randall, M.D., and published in the Bulletin of the Genesee County Medical Society, February 9, 1943.

* * *

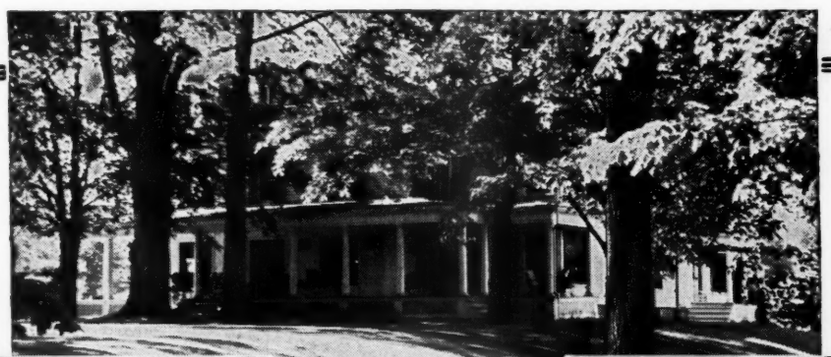
"R-sole-ectomy" is the title of an original "scientific" article which appears in the Bulletin of the Kent County Medical Society, February issue. It is an hilarious personal case history of a proctologic patient.

* * *

The Wayne County Medical Society has authorized the mailing of a letter to all its members urging co-

WEHENKEL SANATORIUM

ROMEO § PRIVATE ESTATE



MICH. § RESTFUL AND QUIET

CONVALESCENT HOME FOR TUBERCULOSIS

A MODERN, comfortable sanatorium adequately equipped for all types of medical and surgical treatment of tuberculosis. Sanatorium easily reached by way of Michigan Highway Number 53 to Corner of Gates St., Romeo, Michigan.

For Detailed Information Regarding Rates and Admission Apply

DR. A. M. WEHENKEL, Medical Director, City Offices, Madison 3312-3

operation with the Red Cross 1943 War Fund Campaign. William C. Lawrence, M.D., is Chairman of the drive among Detroit's medical men.

* * *

The American College of Chest Surgeons has cancelled its 1943 meeting. The Board of Regents recommends that State and District Chapters of the College arrange to meet jointly with their State and District medical societies.

* * *

Roy C. Perkins, M.D., of Bay City has been appointed as the representative of the Michigan State Medical Society to the Advisory Committee for Vocational Rehabilitation of the State Board of Control for Vocational Education.

* * *

Wm. G. Gamble, M.D., of Bay City has been appointed as Chief of the Emergency Medical Services Division for District No. 5 of the U. S. Citizens Defense Corps of Michigan. Dr. Gamble succeeds F. T. Andrews, M.D., who recently resigned to move to Lansing.

* * *

Harry B. Zemmer, M.D., of Lapeer has been appointed by Governor Harry F. Kelly as a member of the State Hospital Commission.

Congratulations, Dr. Zemmer, and best wishes for full enjoyment and success in your new work for the people of Michigan.

Cover—The statue to Michigan's Civil War Governor, Austin Blair, stands in front of the State Capitol, Lansing. The Capitol building is distinctive at night, because of its illumination by hundreds of incandescent lights. Carl Arksey of Lansing is the artist who made this unusual photograph.

* * *

A testimonial to the 36th General Hospital was given by the *Detroit Medical News,* the bulletin of the Wayne County Medical Society, in its issue of February 22. The 36th was formed in the present war, as well as in the 1918 war, around the Wayne University College of Medicine.

* * *

J. G. Mateer, M.D., James I. Baltz, M.D., D. F. Marion, M.D., and James M. MacMillan, M.D., of Detroit, are authors of an original article which appeared in the JAMA March 6 issue on "Liver Function Tests."

* * *

The American Association of Industrial Physicians and Surgeons, together with the American Industrial Hygiene Association and the National Conference of Governmental Hygienists, will conduct a four-day "War Conference" at Rochester, New York, on May 24-27, 1943. The meeting is open to physicians, surgeons, hygienists, engineers, nurses and executives of industrial plants.

Ferguson-Droste-Ferguson Sanitarium

✤

Ward S. Ferguson, M. D. **James C. Droste, M. D.** **Lynn A. Ferguson, M. D.**

✤

PRACTICE LIMITED TO
DIAGNOSIS AND TREATMENT OF

DISEASES OF THE RECTUM

✤

Sheldon Avenue at Oakes
GRAND RAPIDS, MICHIGAN

✤

Sanitarium Hotel Accommodations

Say you saw it in the Journal of the Michigan State Medical Society

Attention is called to the meeting of the American Psychiatric Association in Detroit at the Statler Hotel, May 10 to May 13, 1943.

The program will consist primarily of War Psychiatry as it is related to the war effort. There will be many presentations which will be of interest to all physicians.

Non-members of the association are invited to register and attend as guests.

The importance of Psychiatry is emphasized by the fact that the meeting has received the approval of the National Office of Transportation.

* * *

Proposed Federal Legislation.—HR-1879, introduced by Representative John B. Bennett of Ontonagon, Michigan, proposes an appropriation of $700,000 to construct a Veterans' Hospital for the accommodation of 150 bed patients in the Upper Peninsula of Michigan.

HR-1956, introduced by Representative George Sadowski of Detroit would provide that every person in the military or naval forces of the United States shall be exempt from all taxes imposed by the United States on incomes. The bill is pending in the House Committee on Ways and Means.

* * *

Your Friends—

Medical Arts Surgical Supply Company, Grand Rapids, Michigan
Medical Case History Bureau, New York, New York
Medical Protective Company, Fort Wayne, Indiana
Mellin's Food Company, Boston, Massachusetts
The Mennen Company, Newark, New Jersey
Merck & Company, Rahway, New Jersey
Wm. S. Merrell Company, Cincinnati, Ohio
Michigan Medical Book Company, Detroit, Michigan
Michigan Medical Service, Detroit, Michigan
Michigan Hospital Service, Detroit, Michigan

The above ten firms were among the exhibitors at the 1942 MSMS annual meeting in Grand Rapids and helped make possible for your enjoyment one of the outstanding state medical meetings in the country. Remember your friends when you have need of equipment, medical supplies, appliances or service.

* * *

Hospitalization of non-referred patients.—A tendency seems to be developing on the part of some people to come to a hospital for medical care without being referred by a physician. The reason given is that they are unable to locate a physician, or unable to get a physician to make a house call. The feeling among the hospital superintendents is that while some of these persons come to the hospital in good faith, yet there is a great opportunity for a bad situation to develop. "It is possible," says the report of the Cincinnati Hospital Superintendents' Council, "that some people may learn that by coming directly to a hospital, they can receive a service somewhat equivalent to an office call without expense, since most hospitals make no charge unless medications are given, or certain types of hospital equipment used."

* * *

No hospital bed shortage in Detroit.—A large number of unoccupied general acute hospital beds existed in Detroit in November, 1942, according to the report of a joint study committee representing the Health Coun-

Step Along with
BORN 1820
Still going strong
JOHNNIE WALKER
BLENDED SCOTCH WHISKY
THE FLAVOR of Johnnie Walker is *different.* One small sip tells you that it is a *distinctive* whisky . . . Scotch at its smooth, mellow best! Distilled and bottled in Scotland. Enjoyed all over America!
Johnnie Walker Red Label
RED LABEL 8 YEARS OLD
BLACK LABEL 12 YEARS OLD
Both 86.8 proof
Canada Dry Ginger Ale, Inc., New York, N. Y. • Sole Importer

LABORATORY APPARATUS

Coors Porcelain
Pyrex Glassware
R. & B. Calibrated Ware
Chemical Thermometers
Hydrometers
Sphygmomanometers

—

J. J. Baker & Co., C. P. Chemicals
Stains and Reagents
Standard Solutions

• BIOLOGICALS •

Serums — Vaccines
Antitoxins — Media
Bacterins — Pollens

We are completely equipped and solicit your inquiry for these lines as well as for Pharmaceuticals, Chemicals and Supplies, Surgical Instruments and Dressings.

The RUPP & BOWMAN CO.
319 SUPERIOR ST., TOLEDO, OHIO

86c out of each $1.00 gross income used for members benefit

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

Hospital, Accident, Sickness
INSURANCE

For ethical practitioners exclusively
(57,000 Policies in Force)

LIBERAL HOSPITAL EXPENSE COVERAGE	For $10.00 per year
$5,000.00 ACCIDENTAL DEATH $25.00 weekly indemnity, accident and sickness	For $32.00 per year
$10,000.00 ACCIDENTAL DEATH $50.00 weekly indemnity, accident and sickness	For $64.00 per year
$15,000.00 ACCIDENTAL DEATH $75.00 weekly indemnity, accident and sickness	For $96.00 per year

41 years under the same management
$2,418,000.00 INVESTED ASSETS
$11,350,000.00 PAID FOR CLAIMS
$200,000 deposited with State of Nebraska for protection of our members.
Disability need not be incurred in line of duty—benefits from the beginning day of disability.
Send for applications, Doctor, to
400 First National Bank Building Omaha, Nebraska

cil of Metropolitan Detroit, the Detroit District Hospital Council, and the Physicians Hospital Relationships Committee of the Wayne County Medical Society. Thirty-two major hospitals, with a bed capacity of 4,982 beds, had an occupancy of 77 per cent during November.

"Stated in another way," says the *Detroit Medical News*, "the daily number of vacant beds during the month was 1,155 or 23 per cent of the total beds. . . . The problem is to relieve the local situation by getting patients into the every fourth bed that is vacant, some 2,000 beds in all, which represents an idle investment in the neighborhood of $10,000,000."

* * *

Food rationing does not affect consumers who need more processed foods because of illness, according to Section 2.5 of Ration Order No. 13, Office of Price Administration, which reads as follows:

"(a) Any consumer whose health requires that he have more processed foods than he can get with War Ration Book Two, may apply for additional points. The application must be made, on OPA Form R-315, by the Consumer himself or by someone acting for him, and may be made in person or by mail. The application can be made only to the board for the place where the consumer lives. He must submit with his application a written statement of a licensed or registered physician or surgeon, showing why he must have more processed foods, the amounts and types he needs during the next two months, and why he cannot use unrationed foods instead.

(b) If the board finds that his health depends upon his getting more processed foods, and that he cannot use or cannot get unrationed foods, it shall issue to him one or more certificates for the number of points necessary to get the additional processed foods he needs during the next two months."

* * *

The two scientific exhibits displayed on the occasion of Michigan's Postgraduate Industrial Medical and Surgical Conference, held in the Rackham Educational Memorial, Detroit, April 8, were exhibited through the courtesy of the American Medical Association Committee on Scientific Exhibits, of which Thomas G. Hull, Ph.D., is Director.

The exhibit on "Industrial Dermatoses," presented in conjunction with the Section on Dermatology and Syphilology of the AMA, consisted of photographs showing various industrial dermatoses.

The exhibit from the Council on Industrial Health, entitled "An Industrial Health Program for a County Medical Society" consisted of posters on panels showing the organization and activities of an industrial health program for a county medical society.

The thanks of the Michigan State Medical Society and its Industrial Health Committee are extended to the American Medical Association and to Doctor Hull for bringing these interesting and instructive exhibits to Michigan.

* * *

What is health insurance?

This term, to advocates of compulsory social insurance, usually means socialized medicine, with or without cash benefits for loss of wages due to sickness.

As an insurance term, health insurance means only

Say you saw it in the Journal of the Michigan State Medical Society

A Concise Up-to-Date Practice

HUGHES'
Practice of Medicine

16th Edition—1942

Designed for the convenience of the general practitioner, and keeping pace with the progress of medicine in every field, this new Hughes is an authoritative guide to the many advances in diagnosis and treatment. Much new material is presented on chemotherapy, vitamin therapy and endocrinotherapy. Various problems relating to the strain and stress of present-day life are considered. Important advances in treatment by sulfonamide compounds are given. Poisoning by war gases, and up-to-date treatment is discussed. The essential facts on diagnosis, etiology, symptoms, treatment, etc., are grouped in convenient paragraphs for reference. Special sections on the skin and on nervous and mental diseases are included.

Revised and Edited by Burgess Gordon, M.D., Jefferson Medical College, Philadelphia.
36 Illus., 791 Pages, $5.75

THE BLAKISTON COMPANY **Philadelphia**

cash benefits for loss of wages and expenses due to sickness.

What is the difference between public assistance (charity) and insurance?

Public assistance is a government system of aid for which the recipients pay no tax or premium. This is plain charity, sometimes called public relief. It is oftentimes made a part of a plan of social insurance but should not be confused with the principles of insurance, wherein periodic premium payments are made by those who expect to receive benefits.

Public assistance beneficiaries, because they are unable to pay premiums, always increase the cost of government insurance plans in which they are included. Charity, whether it is labeled "public assistance" or plain "relief," should not be confused with insurance nor disguised as insurance—*Insurance Economics Society of America, Chicago.*

* * *

The MSMS Radio Committee announces a series of medical broadcasts, beginning Wednesday, February 17, 1943, to be presented for twelve weeks over Station WKAR at 3:45 p.m. The material for these broadcasts is developed and presented by Herman H. Riecker, M.D., Ann Arbor, Chairman of the MSMS Committee on Heart and Degenerative Diseases, as follows:

February 17—"Arthritis"
February 24—"The Care of the Heart in Middle Life"
March 3—"Indigestion. Causes and Management"
March 10—"Fatigue"
March 17—"Foods for Stamina"
March 24—"The Allergic Diseases"
March 31—"How Infections are Spread"
April 7—"Tuberculosis"
April 14—"Immunization vs. Disease"
April 21—"The Control of the Body Weight"
April 28—"The Chronic Cough"
May 5—"The Care of the Elderly"

These broadcasts are in addition to the MSMS radio program presented every Wednesday over WJR, 10:30 P.M. The presentations from March 17 to May 5 are:

March 17—Frank Van Schoick, M.D., Chairman MSMS Child Welfare Committee, Jackson. Topic: "Child Welfare and the War."

March 24—Herman H. Riecker, M.D., Ann Arbor. Topic: "The Health of the Industrial Worker."

March 31—Maurice H. Seevers, Professor of Pharmacology, Ann Arbor. Topic: "Drugged Sleep."

April 7—Maj. Dan Bohmer, U. S. Medical Corps, Univ. R.O.T.C. Topic: "The Army Doctor's Job."

April 14—S. W. Donaldson, M.D., Ann Arbor. Topic: "*You* called the Doctor."

April 21—Carl E. Badgley, M.D., Ann Arbor. Topic: "When You Break a Bone."

April 28—Miss Adelia M. Beeuwkes, Instructor in Public Health Nutrition, Ann Arbor. Topic: "Rationed Eating and Health."

May 5—A. C. Curtis, M.D., Ann Arbor. Topic: "My Skin Itches"

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

In addition to our Professional Liability Policy for private practice we issue a special
MILITARY POLICY
to the profession in the Armed Forces at a
REDUCED PREMIUM

THE
MEDICAL PROTECTIVE COMPANY
OF
FORT WAYNE, INDIANA

Cook County
Graduate School of Medicine
(In Affiliation with Cook County Hospital)
Incorporated not for profit
ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks' Intensive Course in Surgical Technique starting April 19, May 3, 17, and 31, and every two weeks throughout the year.

MEDICINE—Two Weeks' Intensive Course starting June 7. One-Month Course in Electrocardiography and Heart Disease starting the first of every month, except August.

FRACTURES AND TRAUMATIC SURGERY—Two Weeks' Intensive Course starting June 14.

GYNECOLOGY—Two Weeks' Intensive Course starting June 28th; Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks' Intensive Course starting April 19.

OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 13. Course in Refraction Methods starting May 3.

OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 27.

ROENTGENOLOGY—Courses in X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy every week.

UROLOGY—Two Weeks' Course and One-Month Course available every two weeks.

CYSTOSCOPY—Ten-Day Practical Course every two weeks.

General, Intensive and Special Courses in All Branches of Medicine, Surgery and the Specialties.

TEACHING FACULTY — ATTENDING STAFF OF COOK COUNTY HOSPITAL

Address: Registrar, 427 S. Honore St., Chicago, Ill.

IN MEMORIAM

Edward J. Carney of Durand was born in 1878 in Watkins Glen, New York, and was graduated from the Rush Medical College of the University of Chicago. He located in Durand where he practiced forty-two years. Doctor Carney took an active part in civic as well as medical life. He was village president years ago and started immunization clinics in Durand long before a County Health Department was organized. Doctor Carney was a past-president of the Shiawassee County Medical Society and at the time of his death was City Health Officer, a post he held for many years. Doctor Carney died on February 16, 1943.

* * *

Leo F. Secrist of Alpena was born in Ohio in 1886 and was graduated from the homeopathic medical school of the University of Michigan in 1912. He became associated with his father, the late W. A. Secrist, M.D., in Alpena. He was president of the Alpena County Medical Society in 1933 and was on the staff of the Alpena General Hospital. Doctor Secrist was dean of Alpena physicians in view of his long practice in that city. He died March 10, 1943.

* * *

COLLABORATION

Collaboration can be of two kinds, it seems. There are Brothers Hitler and Hirohito, with the new brand —"collaboration" of the enslaved at the point of the sword. Since Americans just don't like that type of collaboration, we are in a war about it.

Rather to be preferred is the teamplay which is making possible the development of the newest of man's brain-children, the electron microscope. There was first an Englishman, with basic discoveries regarding electrons; then an Austrian, a Frenchman, two Germans, a Belgian, two Canadians and several Americans have spliced together the contributions of numerous workers. So that today the electron microscope is a reality, and is in use in research laboratories in several nations. Not limited by the wave length of light, this new tool can magnify 50 to 100 times greater than the finest of previous microscopes. And there is one under construction in New York today that will magnify 1 million times.

Already the virus of tobacco mosaic has been identified by the electron microscope; other viruses are under scrutiny as well as the minute morphology of bacteria and the molecular composition of various compounds. Seen on a fluorescent screen certain bacteria are now known to possess very tough body walls, others have flagella-like appendages. Certain organisms under attack by various chemical compounds have been studied, and the hitherto unknown is beginning to unfold like the pages of a child's primer. Erythrocytes appear to be 2 feet in diameter under the screen of this instrument. Is it too much to expect that many, many of the secrets of life and death, sickness and health will be revealed soon? Numerous serious workers believe that science has opened the door to an entirely new and inspiring vista.

The right sort of collaboration has brought us this great new gift. May Hitler's sort soon perish from this earth—there just isn't room for two kinds.—*Southwestern Medicine,* March, 1942.

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

ATLAS OF OVARIAN TUMORS. By Gemma Barzilai, M.D., New York City. Preface by Fred S. Stewart, M.D., Pathologist Memorial Hospital for the Treatment of Cancer, New York City. New York: Grune and Stratton, 1943. Price $10.00.

Dr. Barzilai has given us a most excellent volume, useful for pathologists and clinicians, making available studies of the specific tumors of the ovary. It is a systematic and clear presentation of ovarian neoplasms, and classification of many that have so far defied classification. The text is clear, large type, with marginal notes and index. This is interspersed with plates giving, in black and white, photo-micrograms with, on the opposing page, a minute description with diagnosis and references. There are 258 original illustrations, 45 in colors on 58 plates. The pages are large, 8½x11 inches, and are bound by a plastic back allowing each page to lie flat.

This book is complete in every detail. Each section contains definition, history, terminology, microscopic picture, cytology, structure, histogenesis, site of origin, symptomatology, malignancy and treatment as they apply.

HAROFÉ HAIVRI, The Hebrew Medical Journal. New York: December, 1942.

Harofé Haivri is a semi-annual publication, in its fifteenth year. We have received a copy and it is most interesting. It is paged from page 1 at the back to page 222 in front. The journal has a symposium on Peripheral Vascular Diseases, a section on the Talmud and Medicine, one on old Hebrew Medical Manuscripts, also an English section which is a translation of the other articles. The English section reads from left to right, and turns pages to the left, but pages are numbered backward. The Hebrew section reads from right to left and from back to front, but it does read from the top to the bottom of the page. The section on the Talmud is a discussion on dentistry, prostheses, oral pathology and oral hygiene. *Fetar ex ore* is widely referred to in the Talmud "If one does not walk, say four cubits, before falling asleep after a meal, that which he has eaten being undigestible, causes foulness of breath"—(P. Talmud. Shabbot 41, a).

NEW AND NONOFFICIAL REMEDIES, 1942, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1942. Cloth. Price postpaid, $1.50. Pp. 671—XCVII. Chicago: American Medical Association, 1942.

Perhaps the most important feature of this new volume of New and Nonofficial Remedies is the radical rearrangement it has undergone, which it is believed will make the contents more accessible and therefore more valuable to the physician or other interested

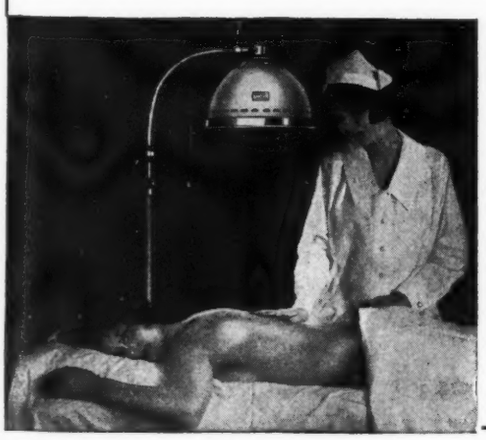
Physical Therapy Has Practical Value

The large scale on which Physical Therapy measures are being used in the armed services indicates the great possibilities of this field of treatment.

The trend toward a wider use of Physical Therapy in civilian practice is seen in the fact that a course on this subject is now in effect in leading medical schools.

If you own Burdick Physical Therapy Equipment, you will be able to put into practice the techniques reported in current literature, to help reduce "time off" for defense workers and to alleviate distress in countless disease conditions.

All Burdick Physical Therapy Equipment is constructed to serve you for years, with negligible replacements. Look for the name "Burdick" on every piece of apparatus.



Take care of your present equipment by consulting your Burdick dealer.

THE G. A. INGRAM COMPANY

4444 Woodward Ave. Detroit, Michigan

The G. A. INGRAM CO.,
4444 Woodward Ave., Detroit, Michigan

Please send me information on Zoalite Infra-red Lamps.

Dr. .....
Address .....
City ..... **State** .....

¶ *All worth while laboratory examinations; including—*

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

Basal Metabolism

Aschheim-Zondek Pregnancy Test

Intravenous Therapy with rest rooms for Patients.

Electrocardiograms

Central Laboratory

Oliver W. Lohr, M.D., Director

537 Millard St.
Saginaw
Phone, Dial 2-3893

The pathologist in direction is recognized by the Council on Medical Education and Hospitals of the A. M. A.

HAY FEVER
EXTRAORDINARY EFFECTIVE TREATMENT
for previously non-responsive patients

Designed for Practical Use by ALL Physicians in this Locality

Today's most effective treatment of Hay Fever is based upon testing with the correct selection of *local* pollens and fungi. Testing technic is simple. It takes but a few minutes to run through the Barry selection for your locality. A Barry Testing Kit may be obtained for your patient containing the specific irritants determined by accurate botanical studies and pollen counts.

TREATMENT: Skin test *reactions of the local pollens and fungi* and a brief history are all that are needed to institute a suitable treatment series with Barry products. This *specialized* service permits incorporation of *ALL* the proper irritants in the proportions that will give most satisfactory results. Each treatment set is "TAILOR-MADE" to meet your own patients' requirements at ordinary stock set cost.

Give your patients the benefit of a scientific treatment that is patterned after allergists' most successful methods.

WRITE TODAY for your Barry Testing Kit containing 20 local pollens and fungi. Complete set 50c.

SPECIAL SERVICE BULLETINS M14 AVAILABLE

Barry Allergy Laboratories, Inc.
9100 KERCHEVAL AT HOLCOMB DETROIT, MICH.

readers. Heretofore, the classification of products has been basically that of chemical relationship—the new arrangement is primarily according to therapeutic use, chemical classification being introduced by means of subheadings. In addition, the typographic style has been changed so as to give greater prominence to the products of individual manufacturers. No valuable feature has been sacrificed. The book still fulfills its function of establishing chemical standards for new and nonofficial preparations which the Council has found to be useful or to give adequate promise of usefulness in the treatment or prevention of disease. Its function as a guide to the most recent advances in therapeutics has been greatly enhanced.

Careful examination of the general discussions under the various headings and subheadings shows that the Council has admirably performed its annual task of keeping the text abreast with the progress of medicine.

INDIGESTION, Its Diagnosis and Management with Special References to Diet. By Martin E. Rehfuss, M.D., Professor of Clinical Medicine, Jefferson Medical College, Philadelphia. Illustrated. Philadelphia and London: W. B. Saunders Company, 1943. Price, $7.00.

Here is a book giving specific information. "The introduction to every medical problem is provided by taking the patient's history." An outline of the simplest initial approach is given, with discussion, then the physical examination, laboratory analyses, x-ray, and gastroscopy. Causes of indigestion are described. Under allergy are given various lists, in order of decreasing frequency, of foods known to give distress to 500 persons, by percentage, from onions 27 per cent to 105 foods 1 per cent or less. Foods are listed causing allergic symptoms, from wheat 211 to a list of 23 reacting once and ten not reacting at all. Chapters are devoted to all types and forms of indigestion: infection, functional disturbance, ulcer, malignancy, biliary, cardiovascular disease and old age, to mention a few. Many prescriptions and procedures for treatment are given in each chapter. Foods and their values, vitamins and their sources, effects of water, calories and the materials of the diet have general and extensive attention. Diet in disease with many suggested menus is a long chapter. We think the book should prove of great practical value.

ENDOSCOPIC PROSTATIC SURGERY. By Roger W. Barnes, M.S., M.D., F.A.C.S., Professor of Clinical Urology, College of Medical Evangelists, Chief of Urology, White Memorial Hospital, Senior Attending Surgeon Los Angeles County Hospital. With 104 illustrations. St. Louis: The C. V. Mosby Company, 1943. Price, $6.00.

Prostatic surgery has undergone revolutionary changes in the past few years, and the endothermic operation merits a book to itself. Dr. Barnes has been a teacher for several years and understands what is necessary for lucid teaching purposes. The history of transurethral surgery is covered in a chapter by Clyde W. Collings, M.D., of Los Angeles. Anatomy, pathology and examination of the patient are well presented, with sufficient illustrations and references. Indications, preoperative care and selection of anesthetic follows. Technical instruction is given on the electric current and

Say you saw it in the Journal of the Michigan State Medical Society

its modification, and on the instruments used, so that the student will understand his tools. Over a hundred pages are devoted to the details of operation with pictures of every sort of procedure. A chapter on punch prostatectomy is included, by H. C. Bumpus, M.D., of Pasadena. It is a very valuable book, 232 pages.

DISEASES OF THE BREAST. By Charles F. Geschickter, M.A., M.D., Lieut. Commander, Medical Corps, United States Naval Reserve, Director of the Francis P. Garvan Cancer Research Laboratory, Baltimore. With a Special Section on Treatment in Collaboration with Murray M. Copeland, A.B., M.D., F.A.C.S., Instructor in Surgery, Johns Hopkins Medical School. 593 illustrations. Philadelphia: J. B. Lippincott Company. 1943. Price, $10.00.

Contributions to the etiology, diagnosis and treatment of mammary diseases in recent years has produced great progress much of which can be attributed to the many classes of specialists interested, surgergy, radiology, obstetrics and gynecology, pathology, endocrinology. The work done in these fields has been brought together in this volume, and placed at the call of the general practitioner and the specialists. Increased importance is being placed on microscopic pathology, and a section is included in each chapter. The book is a comprehensive survey of the subject. Normal development, functional changes, examination and diagnosis, mammary hypertrophy, mastitis, cystic disease, benign fibro-adenoma, cancer, are all carefully and fully studied. Treatment of benign tumors and management of recurrent tumors are given full attention. Throughout the book are one hundred and eighteen tables giving the results of research and a world of information otherwise impossible to find. The book is well written, clear large type, beautifully executed and profusely illustrated. The material is of the latest, and each chapter contains a list of references.

PSYCHOSOMATIC MEDICINE. The Clinical Application of Psychopathology to General Medical Problems. By Edward Weiss, M.D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia; and O. Spurgeon English, M.D., Professor of Psychiatry, Temple University Medical School, Philadelphia and London: W. B. Saunders Company, 1943. Price, $8.00.

"Functional" diseases have been the escape for many conditions where no "organic" disease could be found. Now psychosomatic explanations are offered. Medical practice is divided roughly into thirds. The one includes the so-called "functional" problems, another third of the patients who consult a doctor have symptoms that are in part dependent upon emotional factors. The third group includes disorders generally considered wholly within the realm of physical disease, such as migraine, asthma, and essential hypertension. Psychosomatic medicine is interested in all three to different extents. Not only the physical side of the patient must be studied, but the emotional life may be of utmost importance. The interdependence of the physical and emotional in the cardiovascular system, essential hypertension, is thoroughly discussed and cases in point reported in extensive detail. The gastro-intestinal system, the endocrine system, genito-urinary, respiratory, central nervous systems, and special senses receive like attention. There are several chapters on general principles, problems, and special psychotherapeutic treatment. It is a valuable book on a little understood branch of medicine.

DEPENDABLE
LABORATORY
Service
to the Medical Profession

WHEN nothing less than a high degree of accuracy in a clinical test or a chemical analysis will serve your purpose, you can send us your specimens with confidence. Pleasant, well-equipped examining rooms await your patients. In either the analytical or the clinical department of our laboratory, your tests will be handled with the thoroughness and exactitude which is our undeviating routine. . . Fees are moderate.

Urine Analysis
Blood Chemistry
Hematology
Special Tests
Basal Metabolism
Serology
Parasitology
Mycology
Phenol Coefficients
Bacteriology
Poisons
Court Testimony

Directors: Joseph A. Wolf and Dorothy E. Wolf

Send for Fee List

CENTRAL LABORATORIES
Clinical and Chemical Research
312 David Whitney Bldg. • Detroit, Michigan
Telephones: Cherry 1030 (Res.) Davison 1220

Social and Educational Adjustment

for exceptional children of all ages. Visit the school noted for its work in educational development and fitting such children for more normal living. Beautiful grounds. Home atmosphere. Separate buildings for boys and girls.

Catalog by request.

The MARY E. POGUE SCHOOL
98 GENEVA ROAD WHEATON, ILL.
(NEAR CHICAGO)

Physicians' Service Laboratory

Announce the removal of their office from 608 Kales Building to more roomy quarters at

610 KALES BUILDING
Detroit, Michigan

We hope you will like them as well as we do.

M. S. Tarpinian, B. S. Director

PROFESSIONAL ANNOUNCEMENTS

CYRUS B. GARDNER, M.D., F.A.C.S.

Surgery

Consultations by Appointment

Physicians and Surgeons Bldg.
LANSING, MICHIGAN

R. EARLE SMITH, M.D.

Practice Limited to

DERMATOLOGY

Suite 709, Ashton Building
GRAND RAPIDS, MICHIGAN

Randolph 8123 — Residence Longfellow 1483

WALTER J. WILSON, M.D.
WALTER J. WILSON, Jr., M.D.
1245-47 David Whitney Building

CARDIOLOGY
PORTABLE ELECTROCARDIOGRAPHY
Office Consultation by Appointment

DETROIT

MAX K. NEWMAN, M.D.

Physical Therapy
Artificial Fever Therapy

222-225 Professional Building
DETROIT, MICHIGAN

KENT A. ALCORN, M.D.
F.A.C.S.

Practice limited to

UROLOGY

919 Washington Avenue
Bay City, Michigan

E. G. SCHAIBERGER, M.D.

Practice limited to

Diseases of the Rectum
and Colon

420 N. Michigan Avenue
SAGINAW, MICHIGAN

DeNIKE SANITARIUM, Inc.

Established 1893

EXCLUSIVELY for the TREATMENT OF
ACUTE and CHRONIC ALCOHOLISM

626 E. GRAND BLVD. DETROIT

Telephones: Plaza 1777-1778 and Cadillac 2670
A. JAMES DeNIKE, M.D., Medical Superintendent

In Lansing

HOTEL OLDS

Fireproof

400 ROOMS

Zemmer

PRESCRIBE or DISPENSE ZEMMER PHARMACEUTICALS
Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. Write for catalogue.

Chemists to the Medical Profession

THE ZEMMER COMPANY, Oakland Station, Pittsburgh, Pa.

MIC 4-43

Some men are so clever!

Take my boss for instance . . .

Yesterday, I overheard him talking to another doctor about infant feeding.

"Jim," he said, "I'll tell you why you never have any time to spare. You get yourself tied up with a lot of unnecessary work.

"You believe in prescribing plain cow's milk modified. Haven't you found out that S-M-A* will save you a lot of unnecessary questions? Cut out a lot of bothersome arithmetic?

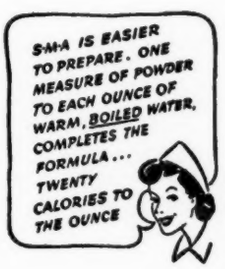
"Heaven knows, we're busy enough as it is. I'll bet you a couple of tickets for the big game that with S-M-A on the job—your patients won't have to telephone you so often to ask about their baby's formula."

Well, you can see why I think my boss is so clever. Why don't you try S-M-A in your own practice, doctor? See if you don't like it better.

BUSY DOCTORS TODAY— PRESCRIBE S-M-A!

With the exception of Vitamin C . . . S-M-A is nutritionally complete. Vitamins B_1, D and A are included in adequate proportion . . . ready to feed. Their presence in S-M-A prevents the development of subclinical vitamin deficiencies . . . because the infant gets all the necessary vitamins right from the start.

S-M-A has still another highly important advantage not found in other modified milk formulas. It contains a special fat that resembles breast milk fat . . . resembles it chemically and physically—according to impartial laboratory tests. S-M-A fat is more readily digested and tolerated by most infants than cow's milk fat.


S-M-A IS EASIER TO PREPARE. ONE MEASURE OF POWDER TO EACH OUNCE OF WARM, BOILED WATER, COMPLETES THE FORMULA... TWENTY CALORIES TO THE OUNCE

The infant food that is nutritionally complete

SMA

*REG. U. S. PAT. OFF.

S. M. A. Corporation
8100 McCormick Boulevard
Chicago, Illinois

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

S-M-A, a trade-mark of S.M.A. Corporation, for its brand of food especially prepared for infant feeding—derived from tuberculin-tested cow's milk, the fat of which is replaced by animal and vegetable fats, including biologically tested cod liver oil; with the addition of milk sugar and potassium chloride; altogether forming an antirachitic food. When diluted according to directions, it is essentially similar to human milk in percentages of protein, fat, carbohydrate and ash, in chemical constants of the fat and physical properties.

BACKGROUND

Three Decades of Clinical Experience

THE use of cow's milk, water and carbohydrate mixtures represents the one system of infant feeding that consistently, for three decades, has received universal pediatric recognition. No carbohydrate employed in this system of infant feeding enjoys so rich and enduring a background of authoritative clinical experience as Dextri-Maltose.

DEXTRI-MALTOSE No. 1 (with 2% sodium chloride), for normal babies.
DEXTRI-MALTOSE No. 2 (plain, salt free), permits salt modifications by the physician.
DEXTRI-MALTOSE No. 3 (with 3% potassium bicarbonate), for constipated babies.

These products are hypo-allergenic.

DEXTRI-MALTOSE

Please enclose professional card when requesting samples of Mead Johnson products to coöperate in preventing their reaching unauthorized persons. Mead Johnson & Company, Evansville, Ind., U. S. A.

MILWAUKEE SANITARIUM Wauwatosa, Wis.

For NERVOUS DISORDERS

(Chicago Office—1117 Marshall Field Annex Wednesdays, 1-3 P. M.)

Maintaining highest standards for more than half a century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars sent on request.

Lloyd H. Ziegler, M.D.
William T. Kradwell, M.D.
Merle Q. Howard, M.D.
Carroll W. Osgood, M.D.
Benjamin A. Ruskin, M.D.
Arthur J. Patek, M.D.

COLONIAL HALL—
One of the 14 Units in "Cottage Plan."

DR E W SINK MJ
UNIVERSITY HEALTH SERVICE
ANN ARBOR, MICH